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ABSTRACT

This document contains four monographs on serving adults with learning disabilities. The preface (Mary Ann Corley) explains how the papers were commissioned. The primary and secondary characteristics of learning-disabled adults and the implications of those characteristics for adult literacy programs are discussed in "Characteristics of Adults with Specific Learning Disabilities" (Paul J. Gerber). In "Screening for Learning Disabilities in Adult Literacy Programs," Daryl F. Mellard describes several effective screening procedures, their role in the overall assessment process, and the links between screening results and instruction. "Effective Instruction for Adults with Learning Disabilities" (Charles Hughes) details 16 principles of effective instruction: teach important skills, teach less better, teach explicitly, teach contextually, explain what is to be learned, check the old before teaching the new, model what is to be learned, use supported practice, use controlled materials, provide sufficient practice, require frequent responses, provide corrective feedback, promote generalization, be prepared, use accommodations only when necessary, and use caution in selecting instructional techniques. "Specific Learning Disabilities: A Civil Rights Issue" (Peter S. Latham, Patricia H. Latham) explores the legal rights of adults with specific learning disabilities in the areas of education and employment. In "National Adult Literacy and Learning Disabilities Monographs: A Conclusion," Neil A. Sturomski and B. Keith Lenz reiterate the main issues raised in the monographs. (MN)

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Serving Adults with Learning Disabilities: Implications for Effective Practice

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Serving Adults with Learning Disabilities: Implications for Effective Practice

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- Screening for Learning Disabilities in Adult Literacy Programs
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Preface

The four monographs in this publication were written for adult literacy practitioners. They have been developed by the National Adult Literacy and Learning Disabilities Center (National ALLD Center) in response to numerous requests from the adult literacy field for information about learning disabilities (LD) and their implications for literacy providers interested in enhancing the delivery of services for adult learners with LD. The purpose of the monographs is to identify, translate, and interpret research surrounding the following issues: characteristics of adults with learning disabilities, screening for possible learning disabilities in adults, and effective instruction for adults with LD. The publication also addresses the civil rights of adults with LD and the legal implications for literacy programs in serving these learners.

The monographs will be disseminated along with two other products of the National ALLD Center: the guidebooks, *Bridges to Practice: A Research-based Guide for Literacy Providers Serving Adults with Learning Disabilities,* and the video, *Systemic Reform within Adult Literacy Programs: Serving Adults with Learning Disabilities*. Implicit in all three products is the notion that, to provide services which are both effective and responsive to the needs of adults with LD, adult literacy programs may need to re-think the ways in which their programs are structured. Do adult literacy programs have in place a comprehensive model for providing services to adults with LD? Do they have a process for screening adult learners for the possibility of learning disabilities? Do they provide professional development activities for staff concerning instructional strategies appropriate for adults with LD? Do they know the rights and responsibilities of the educational institution in providing services to adults with LD, and are they in compliance with federal requirements? We hope that this publication, along with the guidebooks and the video, will provide the stimulus for program staff to begin the change process.

Special recognition is given the U.S. Department of Education, Office of Vocational and Adult Education, for providing both the vision and the necessary funds, through the National Institute for Literacy, for the National ALLD Center to undertake and complete this project. In addition, appreciation is extended to the primary editors of the publication, B. Keith Lenz and Neil A. Sturomski, for conceptualizing and providing oversight to the development of the publication. Appreciation also is extended to the authors: Paul Gerber (characteristics of adults with LD), Daryl Mellard (screening), Charles Hughes (effective instruction), and Patricia and Peter Latham (civil rights).

For more information about products of the National ALLD Center, contact the National Adult Literacy and Learning Disabilities Center, Academy for Educational Development, 1875 Connecticut Avenue, NW, Washington, DC 20009, or telephone 1(800) 953-ALLD.

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Characteristics of Adults with Specific Learning Disabilities

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Executive Summary

Learning disabilities (LD) are invisible; therefore, it is important to go beyond the learning disabilities "label" and to recognize the great diversity among adults with LD. However, while there is great diversity, the concept of learning disabilities has at its core the notion of normal intelligence. It is important to factor out any misunderstandings with the concept of mental retardation. The two disabilities are different and categorically mutually exclusive. In addition, learning disabilities persist throughout an individual's life, and the problems associated with a disability change across the lifespan. As a result, as an individual with a learning disability moves into adulthood, it is important to rethink what a learning disability might really mean.

Adults with LD show a wide array of characteristics that are problematic for them in their daily lives. In each case, there is a high probability that the source of the problem(s) is the underlying dynamics of the learning disability: the psychological processes that have a bearing on the observed problem. These psychological processes include cognition, perception, language, attention, motoric abilities, and social skills. These processes, individually or collectively, have a bearing on academic skills, but they have equally as much impact in all areas of adult functioning--whether at home, at work, or in the community.

There also are numerous secondary characteristics relevant to the experience of adults with LD. These characteristics can be viewed as the 'next layer' of manifestations of learning disabilities, which emerge as a collection of coping mechanisms or a set of thoughts and feelings that may show themselves in either positive or negative ways. For example, adults with LD may have an overall feeling of lack of self-worth, low self-esteem, and poor self-concept because they are embarrassed by their disability. As a result, adults carry a set of "emotional baggage" into most social and learning experiences and daily living tasks. However, some adults

are able to learn from their disability and to develop a resiliency to failure; that is, they develop an ability to bounce back and are able to meet greater challenges.

These characteristics have significant implications for the assessment process and type of instruction that is provided. Adult literacy programs need to take screening procedures and the essential follow-up evaluation procedures seriously. Assessment procedures should take into consideration a wide rage of learning characteristics. Instructional procedures should be based on information that results from a thorough evaluation. In addition, instructional goals and decisions should be tempered according to secondary characteristics associated with the disability.

As adult literacy programs begin to develop or improve services for adults with LD, it is important to determine what we really know about learning disabilities and what myths should be dismissed. There are many myths that have frustrated efforts to improve services for adults with LD. Most importantly, our view of adults with LD cannot be based on a simple extension of what we know about the characteristics of LD manifested in childhood. Our efforts to assess and teach adults with LD must be based on how learning disabilities affect their lives.

How to Think about Characteristics

When learning disabilities (LD) are thought about in relation to the adult years, there is added complexity, and there are added manifestations (Cruickshank, Morse, & Johns, 1980; Smith, 1996). In adulthood, the effects of learning disabilities can affect a wide array of areas associated with learning and adaptive behavior (Blalock, 1981; Johnson & Blalock, 1990). No longer can the focus of learning disabilities exclusively be the three R's because there are numerous challenges associated with all of the tasks and activities of adult life and adult responsibilities. At best, the education domain must share equal billing with other important areas of functioning, such as employment, family relations, social/emotional issues, and community and personal adjustment (Gerber & Reiff, 1991).

Because learning disabilities are invisible, those who have a learning disability, or learning disabilities, have hidden difficulties. It is imperative, therefore, that we look beyond the label of LD. The characteristics of LD add specificity to the term, making the strengths and weaknesses of the individual, as well as the trials, tribulations, and triumphs of the disability, more meaningful and understandable (Gerber, 1992; Gerber & Reiff, 1991; Reiff, Gerber, & Ginsberg, 1997).

A number of considerations should be kept in mind when considering the characteristics of adults with LD. First, there is a great diversity within the population (Gerber & Reiff, 1991). This diversity exists because learning disabilities are not a unitary construct. An individual can have one specific problem or a constellation of problems. Moreover, learning disabilities do not manifest themselves in individuals in exactly the same way. Some learning disabilities can be mild, while others can be quite severe. Those

who have severe learning disabilities obviously are those who are most challenged (Dowdy & Smith, 1994; Gerber & Reiff, 1991).

Second, it is important to note that, by definition, an adult who has learning disabilities is of average or above average intelligence. This wide span of ability means that it is possible for IQs to be low average to high or even gifted. What is noteworthy about those who have learning disabilities is that ability does not match achievement--whether in academic areas, in functional behaviors, or in employment outcomes. There seems to be a significant gap between what would be expected, given the individual's ability, and what is actually accomplished (Reiff, Gerber, & Ginsberg, 1993).

The definition of learning disability has at its core the notion of normal intelligence; it is important, therefore, to factor out any misunderstandings with the concept of mental retardation. The two disabilities are diagnostically different and, thus, categorically mutually exclusive. Lack of precise thinking about learning disabilities and mental retardation is common among the general public and contributes to confusion in attitudes, expectations, and treatment (Emily Hall Tremaine Foundation, 1995).

Last, we know that learning disabilities are a persisting problem, a lifelong condition that evolves throughout the developmental continuum (Gerber & Reiff, 1994). For example, what is problematic in a grade-school student can be very different from what is manifested in an adolescent with a learning disability. Similarly, learning disabilities in adulthood present some different themes, challenges, and issues. Therefore, it is important to acknowledge that the experience of being learning disabled varies as an individual progresses through the various levels of development--childhood, adolescence, and adulthood. Even in adulthood, a stage of human development that can be as long as 70 years (early adulthood to senior citizen), there are a multitude of issues to address. In the field of learning disabilities, it is not prudent or wise to approach an understanding of the characteristics of learning disabilities simply by taking a generic approach--that a learning disability is a learning disability no matter what age, stage, or phase of development (Gerber, 1992).

Critical Characteristics

Adults with LD show a wide array of critical characteristics that are problematic for them in their daily lives (Gerber & Reiff, 1990; Gerber & Reiff, 1994; Johnson & Blalock, 1990). First, academic skills that were not mastered during the school-age years remain difficult. Problems arise in such areas as reading, math, spelling, and writing. In each case, there can be a wide variety of reasons for lack of attainment of academic skills. In reading, for example, the reason might be poor comprehension enhancement strategies. Related to mathematics, problems evidence themselves in using math concepts and thinking in mathematical ways (either for daily use or for more sophisticated applications). Finally, in writing, whether the problem is spell-

ing, handwriting, or written expression, there can be many reasons for apparent difficulties.

In each case, there is a high probability that the source of the problem(s) is the underlying dynamics of the learning disability: the psychological processes that have a bearing on the presenting problem. These psychological processes include cognition, perception, language, attention, motoric abilities, and social skills. *These processes, individually or collectively, have a bearing on academic skills, but they have equal impact on all areas of adult functioning--whether at home, at work, or in the community.* Each is discussed briefly below.

Cognition involves the process of thinking. In the case of adults with LD, this may involve their use of cognitive strategies. Many adults with LD may be impulsive when, in fact, the preferred approach would be a reflective one. Thus, their responses may be quick and often not well thought-out. On the other hand, their approach to tasks may be passive rather than active because problem-solving strategies are not well constructed or are lacking altogether. There also can be a general lack of organization in thought and a lack of self-monitoring of the cognitive processes as adults with LD engage in learning, problem solving, and decision making.

Problems with memory also are common. This includes short-term memory for temporary storage. Short-term memory has limited capacity and will erode depending on frequency of use and rehearsal. It sometimes is called "working memory" because it stores information for interpretation of newly presented information. Long-term memory, by contrast, stores information permanently and has unlimited capacity. It becomes essential when retrieval is necessary to aid in cognition.

Perception, both visual and auditory, is an important part of processing information for learning. Adults with LD may have difficulties in recognizing, understanding, and interpreting what is heard (auditory perception) or what is seen (visual perception). Their processing problems can occur in one or both areas. As shown below, each system has smaller parts that have a bearing on perceptual processing.

Auditory processing consists of the following components:

1. auditory discrimination: the ability to distinguish between sounds;
2. auditory figure-background: the ability to hear one sound amidst other competing sounds;
3. auditory memory: the ability to store and retrieve what has been heard;
4. auditory sequencing: the ability to remember the order of things heard in a sequence;

5. auditory blending: the ability to blend single sounds into a word or part of a word; and

6. phonological awareness: the knowledge that words can be broken into smaller words, syllables, letter sounds, blends, etc., the foundational elements for reading.

Visual processing consists of the following components:

1. visual discrimination: the ability to see the differences in objects, letters, and words;

2. visual figure-background: the ability to see an object against its background (and not be distracted by the background, which is an attention component);

3. visual memory: the ability to store and retrieve what has been seen;

4. visual sequencing: the ability to remember the order of things (or letters of words) in a sequence; and

5. visual closure: the ability to recognize or identify an object or graphic symbol even when it is incomplete.

Individuals also receive information about the world tactilely and kinesthetically. Tactile perception involves the ability to receive and interpret information through the sense of touch. Kinesthetic perception is the ability to derive information through the feedback given by the body's muscles. Adults with LD may have difficulties in these areas as well.

Language is a broad area that involves reception (listening and reading) and expression (speaking and writing). When adults with LD have language problems, there can be debilitating effects on many aspects of their lives. The extent depends on the severity of the problem and the degree to which language competence is necessary. In some cases, language proficiency for adults with LD centers around the limited goal of survival skills. Other times, increasingly higher levels of language are needed for a variety of reasons (e.g., employment, daily living activities) (Johnson & Blalock, 1990).

Specific language-related problems can involve understanding the phonology, or sound system, of language. Phonological competence is important in putting sounds together for reading as well as for decoding and encoding language. Morphology is another aspect of language that allows one to comprehend language in meaningful units. The addition of parts of words such as *-s*, *-ed*, and *pre-* modifies the meaning of words and is important in understanding the full extent of communication. Syntax is the element of language whereby words are constructed into meaningful language by means of sequencing. The importance of this element is illustrated in the difference in meaning between the sentences, *Pat pulls the wagon* versus *The wagon pulls Pat*. Understanding the semantic value of words is important as well. Semantics refers to the actual meaning of language, which includes such

elements as vocabulary, understanding phrases, sentences, and passages, as well as the nuances of words themselves. Last, pragmatics focuses on the social meaning of language, tied heavily to social skills and overall social competence. Factors such as eye contact, sharing conversation, and noting intonation and pace of communication are important pragmatic elements.

Attention is a critical characteristic because if one cannot attend, it is difficult to learn and complete tasks, or to focus for a prolonged period of time. Those who have attention problems, often referred to as *attention deficit disorder*, may demonstrate behaviors such as hyperactivity, restlessness, impulsivity, and lack of stick-to-itiveness. Attention also involves the ability to select the most relevant information from that which is superfluous (sometimes called selective attention). Attention is developmental in nature. Therefore, the longest attention spans should be evident in adulthood.

Motoric abilities involve the movement of one's body. This involves balance in activities such as walking and running. It also involves eye-hand coordination used in cutting, typing, handwriting, wordprocessing, and so on. Motoric abilities are used in virtually every activity performed in a given day. They involve activities done on the job, in daily living skills, and in leisure activities. Lack of proficient motoric functioning means awkwardness, clumsiness, sloppiness, being accident-prone, and not being particularly athletic.

Social skills also are noteworthy in the functioning of adults with learning disabilities, because a large part of adulthood involves interacting, communicating, and using high levels of social competence. The following are key characteristics of adults with LD who have difficulties in social skills:

1. social perception: the ability to process social cues and fully understand social situations and their context;
2. social inference: the ability to infer from other people's behavior the essence of social communication; being sensitive to social situations;
3. interpersonal communication: the ability to generate appropriate conversation or maintain a conversation;
4. self-modulation: the ability to shift behavior according to the "signals" of a social situation; and
5. independent functioning: the ability to perform tasks commensurate with adult levels that allow for independence at work, home, and in the community.

Some adults with LD have very good and even superior social skills. When this strength is recognized and utilized, it can be a source of social and vocational success (Reiff, et al., 1997).

Frequently, adults with LD have problems with direction and time. Direction can be the source of a great deal of confusion, stemming from problems in conceptualizing space. For example, it is not uncommon for some adults to have spatial difficulties with concepts such as up-down, east-west, above-below. This clearly has implications for tasks around the house, for activities in the workplace, and for daily living skills, including reading, computing, map reading, driving, and using public transportation of any sort (Blalock, 1981).

In addition, difficulties can exist in the area of conceptualizing or using time effectively. Thus, many adults with learning disabilities have problems with time management, such as arriving at appointments on time and planning and completing tasks to meet a given deadline. Also, keeping track of time can be problematic. Some adults seem to get "lost" because they lose a sense of time when the are engaged in an activity.

Secondary Characteristics

There also are numerous secondary characteristics relevant to the adult learning disabled experience. These characteristics can be viewed as the "next layer" of manifestations of learning disabilities, which emerge as a collection of coping mechanisms or a set of thoughts and feelings evidenced in either positive or negative ways. Because of the complex nature of learning disabilities in adulthood, generalization about secondary characteristics must be viewed with a "discriminating eye"; that is, the characteristics discussed below may present themselves in various forms and exist around a multitude of themes. An understanding of the secondary characteristics of adults with LD, therefore, must be based on the perspectives of the individual as an adult, the learning disability, and the context of lifespan issues.

Social and emotional characteristics are most notable in adults with LD. An overall feeling of lack of self-worth, low self-esteem, and a poor self-concept can be pervasive (Barton & Fuhrmann, 1994). A number of writers in the area of adults with LD have commented that this area typically is where this otherwise heterogeneous population shares a great deal of similarity. Many adults with LD have had particularly painful experiences during their school-age years, both in and out of the classroom. And it seems that they carry their pain each day of their lives, whether they are successful or unsuccessful in their adult lives. Consequently, it is not uncommon for them to feel dumb, stupid, and incompetent (Gerber, Ginsberg, & Reiff, 1992).

Many have carried self-attributions into adulthood, stemming from the notion, *"I am a person who cannot,"* as opposed to *"I am a person who can,"* and they often take on the attitudes and behaviors of learned helplessness (Groteluschen, Barkowski, & Hale, 1990). As a result, many adults with LD see themselves as incapable or as losers. In essence, they feel that if they get something right, they are lucky, and if they get it wrong, then they are dumb! Even adults who have experienced mostly successful lives have

reported that they sometimes feel as if they are "impostors." Their impostor syndrome (Clance, 1985) always make them feel that, despite past accomplishments, they still are not worthy of achievement, and that someone "will find out" that they are not qualified or capable.

For these reasons, it is understandable that adults with LD often experience a sense of frustration and exasperation. The cost is a set of "emotional baggage" that is carried into most social and learning experiences and daily living tasks (Barton &Fuhrmann, 1994). Confronted with myriad challenging tasks every day combined with a history of self-doubt lays the seeds of emotional liability (Gerber & Reiff, 1991). Moreover, stress and anxiety become part of the mix, often leading to an uncontrollable feeling of being overwhelmed by what has to be accomplished. When, in some cases, everything becomes too overwhelming, more intense and protracted emotional reactions become likely, leading to a wide array of mental health problems, including depression.

Within the social and emotional realm, it is particularly difficult to generalize about positive or negative motivation, which in so many cases is situation-specific. For example, some describe adults with LD as having little motivation because of the accumulation of failure experiences over the span of their lives. Unfortunately, this often can be the case. Others are highly motivated at times during their adult years for a variety of reasons. Motivation can be heightened, for instance, when a parent wants to learn to read so he/she can read bedtime stories to his/her children, or when he/she wants to learn a new skill for job advancement or for retraining purposes. In addition, when adults with LD want to take control of their lives, motivation that fuels initial success, and that begets further success, can create an awesome set of dynamics and become a source of lasting intrinsic motivation.

Certain secondary characteristics have been found to be effective for taking control of one's life, which, in turn, leads to greater possibilities of successful adaptation to adult life. One characteristic is the capacity of some adults with LD to be resilient despite past failure. In many cases, the lives of individuals with LD are punctuated with successes and failures. Those who have been able to move forward undeterred by failure (and sometimes strengthened by it) have a greater sense of inner strength and self-confidence. In essence, in tough times, they know that there are good times ahead, if they are able to stick with it (Gerber, et al., 1994).

Resilience is a set of dynamics that affects different segments of the population of adults with LD in different ways. Whereas all individuals with LD have the capacity to be resilient in some cases (e.g., those who typically attend literacy centers), resilience may be more of an exception than a rule.

Another positive characteristic is the unconventional way in which some adults with LD devise learning strategies or adaptive methods to master a task or learn a new routine. They have unique ways in which they approach

tasks, and, when given the time and opportunity, they are able to problem solve in their own style. This process has been termed "learned creativity" and is credited with adaptive techniques used in employment, daily living tasks, and social situations (Gerber, et al., 1992; Reiff, et al., 1997).

Implications for Assessment and Intervention

A growing number of assessment practices is being used with adults with LD. Some are particularly good; others are limited in their usefulness. It is important that the data collected in assessing adults for learning disabilities be comprehensive and reflect the wide array of critical and secondary characteristics evidenced by adults with LD. (At this point, best practices do not allow for simple, generic screening schemes or screening instruments which were devised for children and youth and modified for adults.) Equally important, assessment should address the demands, tasks, and environments of adult life. Therefore, education and training may be only one piece of the adult mosaic. Prevocational, employability issues, and employment also should be addressed, just as the social/emotional domain and daily living issues should. In each case, it is important to look not only for strengths and weaknesses, but also for areas where accommodations and bypasses can be used effectively and efficiently (McCue, 1994; Payne, in press).

An ecological approach to assessment is necessary because of the multifaceted lives adults live (Kaplan & Carter, 1995); that is, there should be a balanced attempt to evaluate functioning in a variety of environments and discover those key elements that can be useful in making the individual with LD more functional. Severity of the problem(s) or deficit(s) always should be noted. In this way, data emerge that show trends toward situation-specific strengths and weaknesses, as well as generalized strengths and weaknesses in adult functioning. Priorities for interventions then can follow.

Intervention practices must take their lead from assessment data. Wherever there are gaps in skills or knowledge, those areas should be tackled with the techniques most fitting to the way the adult learns. While intervention approaches can be remedial in nature, they also should include a repertoire of accommodation strategies in learning, responding, test-taking, and daily living tasks. For example, assistive technologies (i.e., microcomputers, Franklin spellers, pocket calculators, and audiotape recorders) should be included in intervention efforts whenever appropriate (Raskind, 1994).

What Are the Myths?

The myths regarding adults with LD begin long before adulthood. In fact, one major myth has been debunked as a result of studying highly successful adults with LD. Oftentimes, students with learning disabilities are "written off" as individuals who have limited potential, leaving a guarded prognosis for adjustment to adulthood. But a seven-year-old student with

learning disabilities can become a hard-working 17-year-old high school student, a focused 27-year-old parent and employee, and a successful family member and contributor to his/her work group. In essence, there are many possibilities and opportunities for adults with LD to be successful in myriad ways, despite a past spotted with failure and dire prediction of future problems (Gerber, 1992).

Another myth stems from the general notion about employment outcomes for adults with LD. Learning disabilities do not preclude individuals from becoming successful, from being leaders in their organizations or, even better, in their fields. There are countless examples of adults with LD across the country who have "made it" in the professions, in business and industry, in politics and the arts, and some who have become well-known entrepreneurs (Gerber, et al., 1992; Reiff, et al., 1997).

Nevertheless, it should be remembered that there are low-income and poor adults with LD. Learning disabilities are not a middle-class phenomenon, as once believed. There are numerous adults with LD who are underserved and, if identified through social service safety nets, have potential to learn to read, find suitable employment, and participate more fully in their communities (Young, Gerber, Reder, & Cooper, 1996).

The penultimate myth acknowledges an aspect of adult development not written or spoken about in the adult learning disabled literature. Not only are adults with LD different because of the heterogeneity of learning disabilities, but adults with LD are different depending on the phase of adulthood that they are in. There are distinct differences in physical, mental, and psychosocial traits depending on early, middle, or late adulthood. Research even has shown a deterioration in cognitive and other abilities as individuals with LD age (Gerber, Schneiders, et al., 1990). Thus, adulthood is not a constant, and adults with LD are not the same--and should not necessarily be approached in the same manner.

Last, adults with LD have a great deal in common with non-disabled adults. To stress differences without recognizing similarities is to miss the big picture. All adults have strong qualities and human frailties. They yearn for independence, love, and acknowledgment. They are mothers, fathers, aunts, and uncles. They are line-workers, supervisors, and leaders in their professions. They have an agenda that is incomplete in terms of making their adult experiences full. But they are adults *first*, and their learning disabilities define *only part* of what they are all about!

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Screening for Learning Disabilities in Adult Literacy Programs

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Executive Summary

Screening commonly is the first step in any selection, classification, or placement assessment process. Screening procedures are used in many professional areas. For example, screenings are conducted to identify eligible candidates for job positions; vision screenings are conducted to determine if an optical examination should be conducted; and screenings are conducted to evaluate applicants to selective colleges. Specifically, screening measures help determine if further assessment is recommended to explore some area of interest.

In the field of adult literacy, a screening may be conducted to determine if someone has learning problems that might inhibit progress in the types of service offered by a program. However, specific screening procedures also may be used to identify characteristics that might need further exploration through more formal and professional assessment. This additional assessment of learning difficulties might result in diagnosis of a learning disability (LD).

Staff in adult literacy programs use screening procedures to discuss with a learner whether further assessment is desired or possible. The learner will have to balance the perceived value of such information against the financial cost and the effort required to obtain further testing. However, literacy staff should ensure that learners are aware of federal legislation that protects persons with disabilities from discrimination in educational, employment, and public settings; they also should teach learners how they can protect their rights and obtain accommodations according to their disability-related needs.

Staff in adult literacy programs must know about screening procedures and how screening procedures fit into the overall assessment process. In addition, they should know how to identify effective screening measures. Most importantly, because there are legal implications related to screening for learning disabilities, or for implementing screening procedures carelessly or with poor screening instruments, literacy staff need to consider how to approach the screening process and how the results derived from screening procedures will affect their programs and the lives of the adults their programs serve.

Introduction

"Screening" is an assessment term that is unclear in the minds of many. The intent of this paper is to help adults with learning disabilities (LD), literacy providers, adult educators, and assessment staff understand the concept of screening. Specifically, the reader will become more knowledgeable about screening practices and their importance in providing accurate referrals for further LD assessments and in planning interventions. The following questions will be addressed:

- What is screening?
- Why would a literacy program offer LD screening?
- How is LD screening different from other tests?
- What sense should we make from LD screening results?
- What are the links between screening results and instruction?
- How can LD screening activities be integrated into a literacy program?
- How do literacy programs select a screening instrument?

The published literature and even publishers' catalogs use a number of different terms in describing screening instruments. These terms include screening tests, screening checklists, screening measures, and screening assessments. This paper will use a similar variation of terminology to remind the reader that the "test" may be referred to by a number of different terms but generally leads to one decision: Does the tested person exhibit indicators of learning disabilities?

What Is "Screening"?

When you think of examples of "screenings," what comes to mind?

- Nurses screen students in public schools for vision and hearing abilities.
- Speech pathologists screen youngsters for language development.
- School staff complete Count-Your-Kid-In screenings for developmental problems.
- Businesses screen employees for drug use.
- College staff screen applicants as part of admissions.
- Clinic staff complete simple screenings of health status.

You might remember the experience of getting your first driver's license, or of periodically renewing your license, because you had to complete several screenings. This common experience and the other examples above introduce several important concepts that describe screening, including screening for learning disabilities.

Screening is a type of assessment. As such, screening is frequently thought of as the first in a series of assessments (Cronbach, 1984). This concept of a *series of assessments* is important for several reasons. First, the sequence implies that several pieces of different information are important in forming a decision. Second, some information is more important than other information. From a screening measure or a series of screening measures, different information is gathered on a number of important and relevant characteristics.

Screening for learning disabilities has much in common with other types of screening practices, such as applying for the driver's license. Many skills and abilities are necessary to be a safe driver. One such ability is adequate vision. Therefore, the prospective driver completes a vision screening as the first step in receiving a license. The vision screening, much like the vision screening in the public schools, is intended to ensure that the minimum standards of vision are met, i.e., does this person have adequate vision to be a safe driver? If an applicant does not have good visual ability, other predictors of good driving--such as knowledge of the "rules of the road," reaction time, judgment, and motor skills--though important for safe driving, become irrelevant. If the applicant fails the vision screening, further evaluation is warranted, and some corrective action, e.g., eye glasses, may be necessary.

As noted, screening is the first step in a series of assessments. Using the examples from above, we can further describe important characteristics of screening. Typically, screening measures share a number of characteristics:

- inexpensive;
- quick;
- appropriate for large numbers of persons, sometimes in a group setting;
- do not require extensive training of staff;
- have a narrow purpose;
- provide a superficial assessment of several areas (e.g., cognitive, language, motor, academic, social or vocational abilities);
- can help determine the need for further assessments;
- do not identify a person as having or not having a disability; and
- do not yield a label for a person about a disability.

Screening measures are the first steps in an assessment to determine if further testing might be needed; they do not, by themselves, make a diagnosis (Johnson, 1994) or determine if assistance is warranted, or what that assistance might be. The screening test results might be helpful in the selection of areas for further assessments. For example, if an applicant for a driver's license fails the vision screening test, an eye care specialist must complete a form documenting the results of a more comprehensive evaluation. The results of this more comprehensive evaluation determine a diagnosis and recommend corrective actions or treatments. Learning disabilities screenings have similar characteristics (Mellard, 1995).

Why Would a Literacy Program Offer LD Screening?

Recent federal legislation ensures that persons with disabilities are not discriminated against in education, employment, and public settings. Persons who have been evaluated previously for disabilities have the information needed to protect their rights to access and to accommodations. Many individuals entering literacy and adult education programs do not have information about disabilities or have not been evaluated for LD. Since these adult learners have experienced repeated difficulties improving their literacy skills, alternative explanations for those difficulties should be investigated. When literacy program staff include LD screening as an optional assessment, they are able to offer an important service to their adult learners. Thus, LD screening is an important first step for the adult learners who have an undiagnosed disability.

With the results of screening information, the literacy staff may counsel the learners and determine whether further evaluation is worthwhile. For their part, the learners will have to balance the perceived value of such information against the financial cost and effort required to obtain further testing. If learners with an identified disability intend to complete tests such as the General Educational Development (GED) Tests, postsecondary entrance examinations, or employment exams, then they may be entitled to possible accommodations that would make such testing more fair.

Similarly, persons with disabilities are entitled to accommodations in educational and employment settings. These accommodations will help increase the likelihood that they have a reasonable opportunity to access the facilities and complete the needed tasks. For persons with a history of learning and achievement problems, results from LD screening can be informative about other alternatives, including additional testing.

How Is LD Screening Different from Other Tests?

In addition to screening tests, many other types of assessments are available, each with a defined purpose. These other assessments have different names and also differ from screening in several important characteristics.

Literacy providers do not need to know these different assessments, but a brief overview is helpful in understanding the value of different tests.

The work of three national organizations (American Psychological Association, American Educational Research Association, and the National Council on Measurement in Education) is helpful in developing a broader understanding of the many issues involving assessment and test development. These groups are influential at the national level with regard to testing practices and policies. In a joint document, they have identified the following categories of tests: "standardized ability (aptitude and achievement) instruments, diagnostic and evaluative devices, interest inventories, personality inventories, and projective instruments" (AERA, 1985, p. 3). Under this categorization, screening instruments would fit with diagnostic and evaluative devices.

Salvia and Ysseldyke (1985) provide a more functional grouping of tests, based on the type of decision that is made from the test results. Their categories include tests that are useful for decisions about referrals, screening, classification, instructional planning, and evaluating learner progress. Because they are interested in how testing influences decisions about individuals, many literacy providers may find Salvia and Ysseldyke's organization helpful.

Adelman and Taylor (1991) also use a functional model in organizing tests. The four functions of assessment they have identified are classification, selection, specific planning for change, and evaluation of instruction. Understanding differences among these categories can help literacy providers recognize how screening tests are different and how each can be used effectively. Tests can be categorized according to these purposes: (a) screening, (b) selection, (c) placement, (d) diagnosis, and (e) monitoring. These categories are further described below and contrast the information given about screening tests.

Screening tests have an important role in a comprehensive assessment model. Screening for learning disabilities is the first step toward determining whether an individual might have this particular disability. In general, screening tests, even those for learning disabilities, are comparatively quick to administer, inexpensive to use, and do not require a great deal of training.

Selection assessments typically are extensive in the domains of knowledge or skills that are assessed. To administer these tests requires a great deal of knowledge about assessment in general as well as about the particular test. As a result, many such tests are restricted so that they can be administered only by persons with particular training, which may include a specific academic degree. Individualized intelligence or personality tests belong to this category of tests. These tests are important in determining eligibility for programs or successful completion. They typically are the best developed and most extensively researched tests because of the significance attached to the resulting decisions of selection or rejection. As a result, these tests must meet high psychometric standards.

Placement tests are important for adult educators because they commonly are used as part of the information for placing learners in an instructional program. For example, in some programs, a placement test helps determine whether students are ready for instruction at a GED level or if Adult Basic Education (ABE) instruction is more appropriate. In Salvia and Ysseldyke's model, placement tests fit the "instructional planning" assessment category. Historically, a single score has been used for the placement decision. This tradition is changing, however, to include multiple data in making instructional placement decisions. Thus, if the issue is to determine which reading instruction to use, that decision would be based on the results of placement tests and related information. These tests attempt to balance the breadth of the content coverage with just enough depth to keep the testing as short as possible and yet produce accurate scores.

Diagnostic tests play an important role by providing detailed information in a relatively narrow content range. For example, diagnostic tests may focus on specific skills in reading or mathematics. These tests allow the examiner to determine the level of skills and specific types of errors. Because these tests have such a narrow focus, they typically are not used as a global achievement test but might be used to pinpoint the specific problems a person may have in a low achievement area. Accurately representing a person's skills is an important goal for these tests, and their accuracy usually is good, given that so many of the items cover a narrow breadth of content; that is, the tests attempt to provide detailed information about a narrow range of skills.

Tests used in *monitoring* student performance and learning are designed to assess progress. These tests are useful in determining if students are benefiting from instruction; they also are useful in comparing different instructional programs. As a result, such tests are helpful in making curricular and instructional decisions about individual persons and in assessing the overall quality of programs. Of the types of assessment outlined, these tests are most likely to be informal measures constructed according to the specifications of a particular literacy program. Commercially published tests do not perform this function as well as a test designed for a specific program.

What Sense Should Literacy Providers Make from LD Screening Results?

The first part of this chapter describes important characteristics of screening tests and differentiates screening from other types of assessment. It also suggests the information one might expect from a screening test. In general, a screening instrument will indicate whether a person has different characteristics from a comparison group (e.g., other persons of the same age). Literacy providers hope that their LD screening measure will indicate which of the individuals tested are most likely to have learning disabilities. Because literacy programs typically use screening instruments with large numbers of persons to minimize the cost of such testing, they want screen-

ing measures to identify only those persons most likely to have learning disabilities. For these reasons, providers hope that, when numerous persons are screened, the scores distribute along a wide continuum so they will know who to refer or recommend for further testing.

An illustration of a desirable scoring continuum might be helpful. Figure 1 shows a possible test score distribution from an LD screening test. For the purpose of this example, assume that a large number of people were tested with an LD screening measure (e.g., a learning disabilities checklist, a quick reading inventory, a perceptual-motor screening). All scores can be reviewed and arranged from "highly likely to have a learning disability" to "highly unlikely to have a learning disability."

In Figure 1, more people had relatively higher scores and, thus, were not likely to have a learning disability. In this example, the higher the curve, the more persons who have a particular score; indeed most of the scores occur in the high range of the distribution.

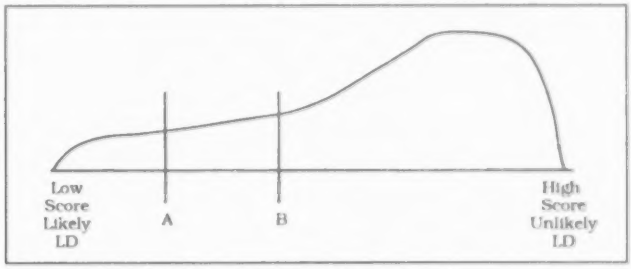

Figure 1. Possible LD Screening Test Score Distribution

If the example in Figure 1 reflects the results of LD screening, the persons likely to have a learning disability (e.g., in reading recognition) have the lower scores and are grouped at the left end of the score distribution. Because of the way in which screening measures are constructed, it is reasonable to expect that the lower a person's score, the greater the likelihood of a learning disability.

Test developers use a little trick in setting cutoff scores. Cutoff scores are selected to indicate who should have further evaluations for learning disabilities. In the above example, a recommendation for further testing would be stronger for persons with lower scores. In Figure 1, two arbitrary cutoff scores (A and B) are drawn. Notice that using the cutoff score at A would include fewer persons than using the cutoff score at B. Thus, with cutoff score A, fewer false positive errors (that is, referring persons who do not have a learning disability) would occur than with cutoff score B. On the other hand, with cutoff score A, more false negatives (that is, missing persons who do have a learning disability) would occur than with cutoff score B.

It is important to remember that all cutoff or criterion scores are arbitrary. Some cutoff scores are based on extensive testing of large numbers of persons; others are based on the experiences of the test developers. Even with the most carefully developed tests, false positive and false negative er-

rors will occur. Although literacy providers might think that the results are always accurate, errors will occur. On the positive side, however, a cutoff score based on extensive testing of large numbers of persons is always more accurate than a cutoff score based on one person's experiences.

Interpreting a person's LD screening score must be done cautiously. The test's manual should provide some examples. Information from the screening test results might include:

(a) the likelihood that a person has a learning disability (e.g., persons with this score 70% of the time have a learning disability);

(b) how a person's score compares to the scores of persons with a learning disability (e.g., this person's score is like that of 65% of the persons who have been identified as having a learning disability);

(c) how the person's score ranks in comparison to the general population (e.g., this score is like that of 40% of the people the same age who took this test in the normative group); or

(d) whether such a score should lead to a referral (e.g., experience suggests that persons who have a similar score should be referred).

Among these outcomes, (a), (b), and (c) would have the greater value because the information is more specific. In addition, such statements indicate that the test development was likely more rigorous, and that we can have more confidence in the findings.

What Are the Links between Screening Results and Instruction?

A common wish of adult educators is that the results of a screening instrument could guide the selection of appropriate instructional or learning activities. Screening instruments, whether in education, employment, or medicine, do not provide that link to corrective actions. As has been suggested throughout these pages, screening results in LD might indicate the likelihood of a learning disability or an area for more in-depth assessment. One of the reasons for this limited information is that screening instruments generally cover a broad range of content areas. The instruments balance *breadth* of content with the *depth* of coverage. For example, the Academic Attribute Survey, a 44-item LD screening instrument used in the California community colleges (Chancellor's Office, 1993), includes items in seven areas: language skills, math skills, study effort, self-evaluation, spelling, assignment completion, and learning ability. An initial pool of test items, which during one field test numbered 93 items (Mellard, 1992), was repeatedly used with students in the colleges until the final 44 items were selected. In selecting items, the process examined items for the extent to which they best differentiated students with LD from non-LD students, fit with the seven areas, were reliable, were applicable across age ranges, and did not evidence a gender, ethnic, racial, or age-related bias. Thus, while the items

might yield information about language or math skills, the score did not suggest a particular instructional approach. In that setting, practitioners found the information helpful in planning further LD assessments, making referrals to other services, and establishing a priority list for testing.

Even when the screening instrument has a more narrow focus of content, information for instruction is limited. The Dyslexia Screening Instrument (Coon, Waguespack, & Polk, 1994), for example, focuses on reading-related skills. The manual's description includes the following:

> The *Dyslexia Screening Instrument* is a rating scale designed to describe the cluster of characteristics associated with dyslexia and to discriminate between students who display these characteristics and students who do not. This scale, for use in the school setting, is quick and nonintrusive, and provides education professionals with a starting point for identifying students at risk for dyslexia. (p. 1).

The authors have intended this 33-item, 5-point rating scale as a screening instrument for students with severe reading problems and do not provide information that links the results to instructional or learning activities. However, they do indicate the instrument's accuracy in predicting the likelihood of dyslexia.

Screening tests do not provide a prescription of how to intervene for a problem but may yield details about areas (e.g., reading, writing, vocational, attention, social, or arithmetic skills) which warrant a closer look. For example, a low score on a word-recognition screening test might indicate that a more comprehensive assessment of the person's word decoding or blending skills would be important. Several authors have attempted to make a connection between screening test results and interventions (e.g., Dowdy, 1992; Koller, Holliday, & Multon, 1995; Multon, Holliday, & Koller, n.d.; Payne and Associates, 1994). In each instance, however, the suggestions are based on the experience of the test developer rather than on a carefully controlled research study that evaluated alternative findings or interpretations. Therefore, literacy providers must be cautious about planning instruction or accommodations based only on screening results. Other confirmatory information is needed.

Generally, screening tests are designed to provide an overall indication of performance (e.g., "Is or is not likely to need further testing for learning disabilities"). Thus, a cautious approach is to review the screening results as an attempt to answer the question, "According to the results, in which areas of performance is further study or testing needed?" In this way, the examiner and examinee will be more informed about the value of and possible focus of additional testing. This cautious approach should help in deciding how best to use one's resources (e.g., time, energy, and money).

How Can LD Screening Activities Be Integrated into a Literacy Program?

LD screening test results can be valuable both for learners who complete the testing and for literacy providers. For the learners who have struggled with literacy tasks, having a better understanding of their own skills and abilities as a result of screening will help them set and attain goals.

For literacy providers, LD screening information can be incorporated into their programs in several ways. Some programs may find it useful to screen all persons who enter the program. By screening all new entrants, the likelihood of someone being missed is reduced. On the negative side, screening requires the use of resources, and it may not be necessary for everyone.

An alternative strategy is to have a more selective screening plan in which individuals are nominated for further screening. In this latter scenario, a series of steps, such as those outlined below, can be followed.

Step 1: Inform learners. Inform all learners that the program staff is interested in helping everyone, especially those with disabilities, and that several federal laws are intended to protect the rights of persons with disabilities.

Step 2: Make inquiries. Ask all learners to identify themselves if they have a disability, but explain that you do not require them to self-identify. Point out the benefit of identifications: that a person with a disability may be entitled to free, special accommodations which may make it easier to access the program, testing, and learning.

Step 3: Confirm disability and accommodation(s). For learners who self-identify as having a disability, confirm their disability and the kinds of accommodations that will facilitate their success. You also may want to gather the relevant records that document the disability and previous accommodations.

Step 4: Complete placements. For all learners, complete the placement activities designed to match them with appropriate curricular materials and instructional activities. Many programs use the results of informal learning inventories and standardized test results to make these placement decisions.

Step 5: Monitor learner progress. Observe the learners as they experience different curricular materials and instructional styles and monitor their sense of effort and success.

Step 6: Discuss screening. To learners who struggle during their learning activities, you might present the option of their completing an LD screen-

ing measure. The screening results might provide some clues about the possibility of a learning disability, the severity of their learning problems, and the value of additional testing.

Step 7: Complete LD screening. At a convenient opportunity, complete the LD screening measure(s) with the learner and share the results. A written summary that graphically illustrates the results may be helpful.

Step 8: Plan next steps. Use the screening results to plan an optimal strategy for assisting the learner. The results should be informative for the learner and be presented as a positive outcome: You and the learner know more now than you did prior to the screening. If a referral for further testing is decided, you can assist the learner in exploring testing options. If a referral is not warranted, discuss the results in light of possible changes in the learner's goals, curriculum, and learning activities.

Step 9: Monitor learner progress. You and the learner have new information which might improve the learner's success, but success is not guaranteed. Monitoring progress is critical to learning and retaining information. In time, you might identify other clues that can assist the learner.

Using these nine steps, literacy providers can develop a plan for integrating LD screening into the normal sequence of activities followed with all learners. The sequence might also help the learners and staff see that instruction and assessment are important components of all learners' success. As a way to reduce anxiety about testing, an obvious link can be made that shows how good assessments, in this case LD screening, can inform instructional and curricular decisions. As a consequence, learners as well as staff benefit.

How Do Literacy Programs Select a Screening Instrument?

Screening instruments exist in a variety of forms and formats (e.g., observational checklists, interviews, self-report questionnaires, and performance tasks). Unfortunately, many of the instruments that are used for screening of LD are inappropriate. Staff at the National Adult Literacy and Learning Disabilities Center (National ALLD Center) have reviewed and evaluated screening instruments. As a result, they have developed 10 standards against which instruments can be compared. The intent of these standards is to provide practitioners with a series of yardsticks that are useful for evaluating how well the many screening instruments measure up. The standards also allow practitioners the flexibility to determine what is most important in the selection process.

The Academic Attribute Survey and the Dyslexia Screening Instrument both may be useful for literacy providers who are screening for LD. However, they are unlikely to be *equally* useful. For example, the Academic Attribute Survey was developed on a community college population and validated against the college's LD model. Practitioners who work with a similar population and LD model would find this instrument most useful. The Dys-

lexia Screening Instrument has a different focus. This instrument was developed primarily with a grade school and high school population and screens for one possible learning disability, dyslexia. Therefore, the content range is narrow, and it has limited usefulness for the practitioner who wants a broader measure of LD characteristics.

Another instrument, the Learning Disabilities Characteristics Checklist (Dowdy, 1990), includes 76 items organized into nine categories (i.e., attention, reasoning/processing, memory, interpersonal skills/emotional maturity, coordination/motor function, communication/oral language, reading, writing/spelling, and math calculation/application). The coverage of areas of LD is quite broad, but, for the literacy provider, some of the usefulness is lost because the items are oriented towards vocational rehabilitation. The context in which the examiner works is important in the selection of an instrument.

Because the results of screening tests are important to providing appropriate services to persons, screening instruments should be selected with great care. Knowing the standards and using them to evaluate alternative instruments are helpful. In addition, once an LD screening instrument has been selected and used, practitioners should continually ask themselves if the results seem accurate. A vigilant approach is well worth the effort to ensure that the testing is meeting the needs of examinees and of the literacy program.

Conclusion

Screening instruments serve an important role in the determination of learning disabilities. Scores from an LD screening instrument or other informal assessment results do not diagnose or confirm a learning disability, but they can help literacy providers know when to make a referral for further LD evaluation. Screening instruments differ from other types of assessment in several ways, and familiarity with other types of assessment is useful in matching their purposes and expected results. While LD screening instruments will not pinpoint effective instructional practices or curricula for a learner, the results can be useful in directing further assessment activities. Knowing the strengths and limitations of various LD screening instruments is important to the literacy provider who can integrate screening into the ongoing activities of providing valuable learning opportunities for adult learners.

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Effective Instruction for Adults with Learning Disabilities

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Executive Summary

Currently there is little empirical, published research on effective instruction with adults with learning disabilities (LD). Accordingly, professionals must rely on research conducted with young adults (e.g., college students or adolescents with LD). The following principles of effective instruction are based to a great extent on this research.

- *Teach important skills. Deciding what is important to teach is critical given the limited amount of time for instruction in most literacy programs. Adults with LD should be involved in deciding what is important, and skills taught should be as functional as possible.*

- *Teach less better. Most adults with LD need explicit, intensive instruction combined with numerous practice sessions to truly master a skill or strategy. It is more effective and efficient to pick fewer (but important) skills and teach them to mastery rather than try to teach a wide range of skills in a cursory fashion.*

- *Teach explicitly. Because of the learning characteristics of many adults with LD, a direct and explicit approach to teaching is more effective than more "discovery" types of approaches.*

- *Teach contextually. Literacy skills and strategies should be taught and practiced in the context of "real life" situations or tasks.*

- *Explain what is to be learned and why it is important. Briefly explaining the purpose of the skill, strategy, or activity prior to teaching it clarifies expectations to the adult with LD. Further, discussing the relevance of what is to be learned can increase learner motivation.*

- *Check the old before teaching the new. Before beginning instruction on a new skill or strategy, verify whether the adult with LD has retained any prerequisite*

skills or knowledge needed to perform the new skills. This type of review is best conducted by requesting that the adult demonstrate the prerequisite skills rather than merely inquiring whether or not he/she can perform them.

· *Model what is to be learned. A clear demonstration of the skill or strategy is a must prior to practicing it. Effective modeling includes both a clear and exaggerated demonstration, as well as a comprehensive description of any covert thinking or decision-making.*

· *Use supported practice. After viewing a demonstration/model, adults with LD benefit from supported or guided practice in a new skill or strategy. Via a series of prompts and/or questions, they are guided through the skill as a way of providing a high level of initial support and success.*

· *Use controlled materials. During initial stages of practice, it is sometimes effective to control the difficulty of the task in which the new skill or strategy is practiced. Initial practice in "easy" materials allows the adult with LD to focus on learning the new skill. Task difficulty can be added when success is achieved in controlled materials.*

· *Provide practice, practice, practice (and more practice). Adults with LD need multiple practice opportunities over time to retain new skills or information. Independent practice (with no guidance or prompting) should be provided only when a high level of success has been achieved during prompted practice.*

· *Require frequent responses. Adults with LD learn better when they stay involved during instructional sessions. One effective way to do this is to ask frequent questions related to the information being taught. This facilitates involvement and provides important information about the adult learner's level of understanding.*

· *Provide corrective feedback. Adults with LD should receive corrective feedback as soon as possible in a matter-of-fact manner. Learning rate is enhanced when feedback about quality and correctness of performance is provided in this way.*

· *Promote generalization. Often adults with LD have difficulty transferring what they learn to different settings or to different, but related, tasks. It is, therefore, imperative that activities and techniques designed to promote skill or strategy generalization be built into literacy instruction.*

· *Be prepared. Implementing the above principles requires preparation. Good teaching may appear "spontaneous"; however, that impression is illusory. The amount of time put into planning is directly related to the quality (effectiveness and efficiency) of instruction.*

· *Use accommodations only when necessary. While reasonable accommodations are required by law and are necessary for appropriate instruction and assessment under certain circumstances, two important warnings apply regarding their use: (a) creating a situation where adults with LD become dependent on others versus becoming independent learners; and (b) not providing the instruction needed to benefit fully from the accommodation.*

· *Use caution when selecting instructional techniques and programs. Many products and approaches purport to be effective with adults with LD. While some may have intuitive appeal and make grandiose claims, there may be no empirical support for their use. Become a cautious consumer. Adults with LD should not be the victims of poor instruction as a result of instructors' jumping on educational bandwagons.*

Introduction

The focus of this monograph is teaching, that is, what you can do to help adults, especially those with learning disabilities (LD), learn important literacy skills. Obviously, all that is known about teaching individuals with learning disabilities cannot be included in this monograph. However, a number of principles of effective instruction used with persons with learning disabilities are presented here. These principles can be applied across a wide range of literacy skills including reading, writing, spelling, math, studying for tests, and completing job applications, as well as to more global cognitive skills such as problem-solving. While the intent of this monograph is to present practices validated through research, there currently are few empirical studies investigating instructional techniques for adults with LD. Accordingly, the principles of instruction presented here are based, to a fair degree, on research conducted with younger individuals (i.e., adolescents).

Principle 1: Teach Important Skills

What is an important skill? Who decides that a skill is important? Sometimes adults may come to class wanting to learn specific things for specific reasons. For example, a person may request that instruction focus on understanding written material related to a specific job. In such cases, students themselves should have a strong voice regarding what skills should be taught. On other occasions, students may come to class with less specific requests, such as "I want to be a better reader or writer." In this situation, the instructor has more responsibility for deciding the focus of intervention, i.e., which skills to teach. This decision may be difficult because many skills can be taught within any academic area.

Deciding which skills are critical to teach is important because of time factors. While a student in public school may have up to 10 hours a week of reading instruction, this is often not the case in adult literacy programs where as little as one hour per week may be all that is available. Also, adults with learning disabilities often learn at a slower rate, making time an even more precious commodity. Because of the time factor, only those skills that have the most functional impact across many areas of the adult's life should be taught.

Principle 2: Teach Less Better

This principle is related to Principle 1 in that it also involves effective use of time and decisions regarding what to teach. Because there is so much to teach and so little time in which to do it, the instructor may be tempted to try to teach as many skills as possible. Frequently, what happens in this situation is that no skill is learned well. Instead, it is better to teach fewer (and, of course, important) skills but to teach them so that each one is mas-

tered completely. Individuals with LD often need direct, explicit, and intensive instruction along with numerous practice attempts over time in order to truly master a skill or retain information to an automatic level (Deshler & Schumaker, 1988; Englert, 1983; Gersten, Woodward, & Darch, 1986; Tarver, 1996). Thus, time is better spent providing sound instruction on a few vital skills than providing cursory, limited instruction on a broad range of skills.

Principle 3: Teach Explicitly

There are various philosophies regarding how best to teach literacy skills. For example, some educators suggest that students be allowed to "discover" or "create" their own knowledge while teachers use indirect methods, functioning solely as a guide or facilitator (Poplin, Wiest, & Thorsson, 1996). Although this may work with motivated learners who have previously mastered basic literacy skills, or with those who learn incidentally or observationally, this approach does not work well with students with LD. Research has demonstrated that individuals with LD acquire literacy skills more efficiently (better and faster) when the teacher takes an active, direct, and explicit approach to teaching basic literacy skills (Bulgren & Lenz, 1996; Pressley & Rankin, 1994; Stahl & Miller, 1989). As noted earlier, when instruction is being designed, it is desirable for adult learners to have a "voice" in what they learn as well as to give their perspective on how they best learn. However, selecting important skills and teaching them explicitly generally is the most effective and efficient approach. Again, given the constraints in instructional time, explicit instruction is the method of choice (for specifics about how to teach explicitly, see Principles 5 through 13).

Principle 4: Teach Contextually

Providing a context for learning and for practicing literacy skills makes the skills more meaningful and useful and allows learners to see how the skills can be applied to "real life." When teaching basic skills such as decoding, vocabulary, writing simple sentences, spelling conventions, and so on, it is important to teach the skills in some context rather than in isolation. For example, learning specific phonics skills or rules is important for beginning or emergent readers, but students should be allowed to practice these skills in actual connected text (e.g., stories, literature) versus practicing them only in isolation (e.g., word lists). Or if writing conventions (e.g., punctuation, grammar) are being taught, students should practice them in the context of their own writing, such as personal notes to friends or business letters, as opposed to completing, for example, worksheets in which they add correct punctuation to already provided sentences (Adams, 1990; Ellis, 1996).

Principle 5: Explain What Is To Be Learned and Why It Is Important

It is useful to start a lesson or an instructional session with a statement of what is to be learned that day, the relevance of the skill, and where and when it can be used. A statement of the learning goal provides learners a

clear understanding of what is expected and prompts them to think about prior knowledge and experiences related to the content being taught that day. It is particularly important for adults with learning difficulties to have a clear idea of the purpose of instruction from the very beginning (Lenz, Alley, & Schumaker, 1987; Roehler & Duffy, 1984).

The explanation of what is to be learned should be brief and to the point, the shorter the better. For example, the instructor might say something like, "Today you are going to begin learning about how to proofread your writing, that is, things you can do to make your writing more clear and error-free." Once learners know what they are going to learn, the instructor should discuss why it is important and under what conditions they can use the skill/information. It is important to involve adults in this discussion. To do so, questions can be posed, such as, "Can you tell me why it is important to be able to go over written work for the purpose of reducing errors?"

Also, the instructor should ask questions related to the circumstances under which the knowledge or skill can be used (e.g., "When could you use proofreading?"). Statements and questions about what is to be learned and its relevance will "set the stage" for actual instruction. As a final note, if it is difficult to generate meaningful relevance statements and/or examples of where a given skill can be used, the instructor may wish to reconsider the importance of teaching that skill. If no one can generate a compelling rationale for learning a skill, it may be prudent to identify a more relevant skill.

Principle 6: Check the Old before Teaching the New

Individuals with LD often have problems retaining information. Therefore, it is a good idea to provide a check of prerequisite skills prior to beginning instruction on a new skill. Verifying retention of previously learned skills related to the new skill being taught is important. For example, when beginning a session on *how* to identify main ideas in a textbook, the instructor may wish to check that students remember pertinent vocabulary such as "topic sentence" or "main idea." To verify whether students remember or can still perform a prerequisite skill, the instructor simply asks them to demonstrate (e.g., ask them to respond to the question, "What is a 'topic sentence' and how do you identify it?"). Teachers often begin a review by re-teaching or lecturing about previously covered material without checking whether students have retained the information. This is an inefficient use of time. Re-teaching should occur *only* if students *cannot* perform the prerequisite or related skill; otherwise, re-teaching is unnecessary. Instructors should remember to ask questions that require students to *demonstrate* competence in the skill. Questions that can be answered with a "yes" or "no" (e.g., "We have been covering the first three steps of the reading comprehension strategy; does everybody remember what they are?") will indicate little about whether information is understood or mastered. The only way to verify if something is known and remembered is to request that learners perform the skill and then check whether they do it correctly (e.g., "Tell me what the first

three steps of the reading strategy are," or "Use the first three steps of the reading strategy on this passage.").

Principle 7: Model What Is to Be Learned

Modeling the skill to be learned is crucial for adults with LD (Englert, 1984; Rivera & Smith, 1988; Smith & Lovitt, 1975). Too often, teachers describe the new skill only once or twice and then require independent practice. This may be sufficient for some learners (e.g., bright students who know a lot about the topic to begin with) but is not sufficient for most. Modeling is made up of two teacher behaviors: physically performing the skill, and verbally describing both what is being done and the covert thinking and decision-making that occur when the skill is being performed. For example, when teaching an error-monitoring strategy, the instructor would actually perform the procedure on a sample of written work (on the board or a transparency) while explaining what he/she is doing and why (versus just talking/lecturing). When modeling the first couple of times (a skill/procedure should always be modeled at least twice), the instructor should perform and talk about the skill/procedure slowly and in an exaggerated fashion.

After modeling the skill one or two times, the instructor should involve adults in modeling the activity/skill. This is done for two reasons: first, it gets them involved in the learning process by requiring them to make some sort of response rather than just sitting there, and second, it provides the instructor with valuable information about how well they have understood the information being presented/demonstrated. For example, after modeling several steps of an error-monitoring strategy, the instructor can involve students in the model via questioning techniques. The instructor may say, "You have watched and listened to me while I have demonstrated the first several steps of the error-monitoring strategy. Now I want you to help me go through it. What should I do first? Why should I do this first? When I perform the second step, what should I do?" and so on. Having them "help" perform the strategy will solidify their understanding of the strategy as well as inform the teacher about the level of their understanding. Once it appears that they have begun to acquire and understand the modeled skill, it is time for practice.

Principle 8: Use Prompted Practice

After describing and/or demonstrating new content, teachers often have students practice on their own. This can be a serious instructional mistake. Even if students have demonstrated an emerging understanding through their involvement in the model, it is unlikely that they are ready to practice on their own. If they have partial understanding or their understanding is not "firm," requiring them to practice independently may result in errors. Although the expression, "We learn through our errors," may apply to many people, for students with LD, only one thing is learned when practicing

errors: how to do something incorrectly. Thus, it is a characteristic of many individuals with LD that once they have practiced something incorrectly, it is extremely difficult for them to relearn it correctly (Deshler & Schumaker, 1988; Deshler, Schumaker & Lenz, 1984; Englert, 1984; Rosenshine & Stevens, 1986). Although some errors will occur, it is crucial to minimize them. One way of minimizing errors while allowing practice is through prompting.

Prompted practice is sometimes referred to as *guided practice*. The teacher prompts or guides students while they perform the emerging skill. This usually is done via verbal teacher questioning. Going back to the error-monitoring strategy mentioned above, the teacher may say the following, "You really seem to be understanding the strategy steps. Now it's time to begin to practice using them. I am going to guide you while you perform the steps. What will you do first? Right. Go ahead and perform that step. Excellent. Now, what do you do next? That's correct. Go ahead and do it." This type of verbal prompting is similar to involving students in the model. The only difference is that the teacher has substituted the word "you" for "I." This is because, in the model step, *the teacher* is performing the strategy; in the prompt step, *the student* is performing it. This type of guided, structured practice provides support for students as they practice new skills. Proceeding step by step, versus telling them to perform the whole strategy and checking later to see how they did, allows the instructor to see if an error is made, thus allowing for immediate and corrective feedback, if necessary.

Principle 9: Use Controlled Materials

Another principle that can be used during initial prompted practice to reduce errors is providing "controlled" materials. What is being controlled is the difficulty level of the material or the situation in which the new skill is practiced. To illustrate, when teaching their children to drive, most parents proceed to the nearest empty parking lot rather than the freeway. In this way, they control the difficulty of the situation in which their children are practicing a new skill (driving). Specifically, they are increasing the odds that the initial practice will be successful and that mistakes will not be costly.

This type of controlled prompted practice also is often necessary in academic situations (Deshler, Ellis, & Lenz, 1996; Deshler & Schumaker, 1988). When teaching a reading comprehension strategy and providing initial practice in using the strategy, the teacher probably would not have students use it with difficult reading materials. A better option would be to allow them first to practice their new strategy using easy reading materials so that the difficulty of the material does not interfere with practicing the new skill. Once adults have demonstrated a high rate of success under prompted and controlled situations, the instructor gradually reduces the number of prompts and provides practice with increasingly more difficult materials. When success occurs with minimal prompting (and only then), *independent* practice can begin.

Principle 10: Provide Practice, Practice, Practice (and More Practice)

The word *practice* is written above four times to stress that independent practice is critical and that practicing once (or even twice) is insufficient for building proficiency or retention, especially for adults with LD (Englert, 1983; Rosenshine & Stevens, 1986). A too frequent practice is "teach and leave"; that is, all too often something is taught, practiced a couple of times, and then dropped. The assumption is that, if the student "gets it right" once or twice, he/she will always get it right. Not true! Practice must be both distributed and cumulative. *Distributed practice,* versus massed practice, which is what is done when "cramming" for an exam in school, occurs when practice is distributed over time. Independent practice should occur over time. Initially, newly acquired skills should be practiced frequently (several times a week). If high rates of success are occurring, practice can be less frequent.

Newly acquired skills can be practiced by themselves (e.g., practicing correct grammar by writing sentences), or they can be practiced via cumulative practice. *Cumulative practice* occurs when a previously taught skill is practiced with other related skills. For example, correct grammar usage can be practiced with other previously learned sentence-writing or paragraph-writing skills or in the context of an overall error-correction strategy. Providing cumulative practice allows distributed practice as related skills are incorporated.

There are several guidelines for the instructor to keep in mind when developing and implementing independent practice. First, independent practice (e.g., out-of-class assignments) should never be assigned until adults with LD have demonstrated proficiency in the target skill. Second, when designing or selecting the format for practice (e.g., worksheet), the teacher should make sure that it actually requires the student to perform the skill in question. Often independent work tasks do not "match" the skill taught. Third, the teacher should make sure that the directions are clear. It may be a good idea to go over the assignment while still in class to ensure that students understand. Last, the teacher should make sure that a "reasonable" amount of work is required and that it matches the amount of time adults have in their lives for independent work activities.

Practice also helps to generalize use of acquired skills (see Principle 13 for a further discussion of generalization). Multiple practice sessions with high rates of correct response lead to fluency (accurate and fast). *Fluency* means that the skill has become so automatic that an individual uses it with little conscious thought and applies it with ease. Because the skill is easy to use, its continued use is more likely. Skills that are not performed at a fluent level tend to go unused.

Principle 11: Require Frequent Responses

Too often, teaching resembles a monologue: teachers talk and learners listen. This method of instruction promotes passivity in adults with LD, who often are referred to as passive learners. Thus, an integral part of teaching adults with LD is keeping them actively involved in the lesson. One effective way to do this is to require as many responses as possible. Requiring frequent responses not only keeps learners focused on the content they are learning, it also provides the instructor with information about how well they understand what they are learning because he/she is getting continuous information about rates of correct and incorrect responses.

How many responses are enough? It depends. If relatively simple skills such as vowel sounds, initial sounds, etc., are being taught, whereby responses are short and the presentation rate is fast, then it is possible to require 10 to 15 responses per minute (or more). If the skill being presented or practiced is more complex (e.g., learning rule usage, a multi-step strategy), then several responses per minute may be more appropriate. In either case, the principle remains the same: the teacher should require as many responses as possible. One way the teacher can remember this principle is to use the three-statement rule: Never make more than three statements without requiring a student response.

Principle 12: Provide Corrective Feedback

No matter how well the information is presented, mistakes will be made. When this happens, the instructor needs to provide corrective feedback immediately. Teachers occasionally feel uncomfortable telling students they are "wrong." However, efficient and effective instruction requires that they do so and as soon as possible (Kline, 1989). In the error-correction/feedback process, the first thing the teacher needs to do is to closely monitor responses. If the teacher is not aware of an error, he/she cannot correct it.

There are several guidelines or procedures the instructor can follow (and some he/she should avoid) when correcting errors. First, if the incorrect response is related to factual knowledge (e.g., saying a vowel sound, pronouncing a word, math fact), the instructor simply, and in a matter-of-fact manner, states or performs the correct answer/response and then requires the correct response. If the teacher is working with a small group, the correction can be done as a group. This may alleviate some embarrassment for whoever made the error because he/she is not being "singled out." Regardless of how correction is done (group or individual), the individual making the error should always end the error-correction process by making the correct response. Additionally, it is important for the teacher to go back later in the lesson and require the correct response/answer from the person who made the incorrect response (again, this can be done with the whole group). This helps to "firm up" the knowledge as well as to inform the instructor if a problem still exists.

If the error is procedural (rather than factual) in nature, the correction procedure is somewhat different. Procedural knowledge relates to how well tasks that consist of a series of steps or rule relationships are performed. For example, spelling rules fall under this category. If the instructor is teaching a spelling rule such as, "When a word ends in a vowel-consonant-e pattern, drop the "e" before adding an ending that begins with a vowel," and the student misapplies the rule, it is best for the instructor to use prompting as the error-correction method. Doing so reminds the learner of the rule and allows the teacher to ascertain where in the procedure the difficulty is occurring. Let's say the word *seeing* was spelled "seing" because the spelling rule was applied when it shouldn't have been. Then the teacher could say something like, "Let's look at this word (*see*). Tell me what the first part of the spelling rule is. Right. You check to see if the word ends with a vowel-consonant-e. Does the word '*see*' end with a vowel-consonant-e? That's right, it doesn't. So in this case, would you drop the 'e' when you add the ending? That's right, you wouldn't. Go ahead and spell it correctly." In a procedural correction, just as in the factual correction, the skill always is performed correctly at the end.

A couple of relatively common teacher reactions to incorrect student responses should be *avoided* including "*going fishing*" and "*you're getting warmer*." "Going fishing" occurs in group instruction. In this situation, an individual makes an error and the teacher goes fishing for the right answer from others in the group (e.g., "No that's not it. Fred, do you know the answer? No? How about you Ellen?" and so on). Going fishing is a waste of instructional time and does not require the student making the error to make the correct response. It also is embarrassing for students. But most importantly, it does not provide students an opportunity to practice the skill correctly. "Getting warmer" goes something like, "No, but you're really close. Try again. No, but that was closer try again," and so on. Again, this approach wastes time, promotes guessing, and often results in practicing errors.

Because making mistakes can cause discomfort for all involved, there are several things the instructor can do to make instructional sessions "safe places" for making errors. First, when teaching in groups, the instructor should make corrections with the group instead of with the individual (the others can use the practice, too). Second, the instructor should make corrections in a neutral, nonthreatening manner. Third, he/she should communicate that errors are part of learning. For example, when the instructor makes a mistake, he/she should admit it freely without being defensive.

Principle 13: Promote Generalization

A frequently noted aspect of a learning disability is difficulty in generalizing learned skills and strategies to other settings and to other similar tasks (Ellis, Lenz, & Sabornie, 1987a, 1987b). Unfortunately, if teachers are not aware of this characteristic, they may do what is known as "teach and hope,"

that is, they teach a skill or strategy and then hope it will be used correctly in other contexts (i.e., with other persons, settings, and tasks). In this case, hoping usually is not enough. What is needed are specific activities for promoting generalization.

Generalization should be part of the instructional process from the beginning. It begins by having discussions early on about why the skill is important and where it can be used (see Principle 5). When a student has acquired a skill (i.e., can accurately perform the skill independently in the teacher's presence), additional procedures are used to ensure that the skill will be used appropriately in other contexts. First, the teacher should provide more discussion about the necessity of applying the newly acquired skill/knowledge beyond the context in which it was taught. This discussion centers on rationales for using the skill across settings, identifying settings and tasks that will likely require the skill, how learners will remind themselves to use the knowledge, and what kinds of cues exist that signal its use.

Discussions about generalization serve the important purpose of orienting students to the necessity of generalizing what they learn, but these discussions should be viewed as only a first step. Other specific activities are needed to promote generalization, including use of newly acquired skills outside of the tutoring situation (e.g., at home, on the job) and then a later discussion about how these skills were implemented and whether they were useful. Also, when appropriate, the teacher should suggest practicing new skills with a variety of materials. For example, if the skill in question is a reading-comprehension strategy, the instructor should provide opportunities to apply the strategy when reading newspapers, magazines, fiction, etc. Too often, adults with LD do not readily see that a skill or strategy can be applied to other related materials or contexts (Ellis & Lenz, 1996).

So far, this discussion has centered on avoiding *under*generalization of newly acquired skills. Occasionally, depending on the type of skill taught, adults with LD also will *over*generalize. This phenomenon, sometimes referred to as, "I just learned how to use a hammer and everything looks like a nail to me," occurs when an adult learns something but applies it indiscriminately. In this situation, it is your job to reduce overuse by teaching how to discern when it is appropriate (or inappropriate) to apply a skill or strategy. This is typically done through the use of nonexamples (Kameenui & Simmons, 1990).

Nonexamples are similar to examples but vary slightly. To illustrate, if a teacher had just taught the phonic rule, "When a word ends with a vowel-consonant-e, you say the long sound of the vowel," and he/she provided only examples (words that ended with a v-c-e pattern) with which to practice, it is possible that in the future students might overapply the rule (for example, when reading a consonant-vowel-consonant word, with no "e" ending). In order to teach them to discriminate when the v-c-e rule applies or does not apply, the teacher should provide practice that includes both v-c-e words and words that don't end with "e" (e.g., *made* and *mad*; *tape* and *tap*). This

requires close inspection of practice items to see whether the rule applies. The teacher should remember that nonexamples are different from exceptions. Exceptions are items that are included under the rule but do not follow the rule. Using the above example, the words *come* and *gone* are exceptions to the rule. When teaching rules, it is a good idea for the instructor to introduce exceptions after students have mastered the rule. If a rule has many exceptions, it is probably not a good rule to teach because it has limited application.

Principle 14: Be Prepared

Although this principle is being presented last, it actually is the first step in the teaching process. The other principles are presented first to provide a context for this important principle. Too often, teachers do not put in enough "up front" time prior to instruction. It is obvious from the above process that teaching adults with LD is not a simple matter and that a lot of thought and planning need to occur if instruction is to be effective and efficient. Preparation and organization are not fun or exciting, but they are necessary.

Preparation of a lesson requires a lot of thought. Teachers need to prepare rationales for teaching, decide which prerequisite skills need to be checked, determine how they will model and which materials to use, produce relevant examples and nonexamples, develop or choose appropriate practice materials, and so on. Without this type of preparation and organization, the instructional process becomes inefficient and, in fact, may be confusing.

Being prepared also includes making the best use of the limited amount of instructional time. Teachers who spend the first 5 to 10 minutes of an instructional session getting their materials (and their thoughts) together waste valuable learning time. Teacher effectiveness research shows time and again that the more time spent teaching effectively, the higher the levels of student achievement (Kameenui & Simmons, 1990; Rosenshine & Stevens, 1986).

Other Instructional Issues

The above principles relate to explicit instruction designed to teach adults with LD skills and strategies needed to cope with literacy demands in their lives. Other instructional approaches that also are worthy of some discussion related to their utility within the context of literacy programs are academic accommodations and "specialized approaches."

Accommodations. *Accommodation* refers to a modification of some aspect(s) of an academic expectation in an attempt to "work around" the learning disability. Reasonable accommodations are used frequently in public schools and are required in a variety of settings (e.g., college, workplace) by

the Americans with Disabilities Act (ADA). Examples of accommodations include audiotaping textbooks for persons with reading problems, allowing extended time to take tests for students with motor and processing speed difficulties, or providing notetakers for students with writing problems.

While some individuals (e.g., nonreaders) benefit from accommodations (e.g., taped texts), you need to be aware of two possible pitfalls related to this approach: (a) overrelying on accommodations to the exclusion of teaching adults with LD skills and strategies that enable them to cope independently with the literacy expectations and demands in their lives; and (b) providing accommodations without concurrently teaching skills and strategies that would allow adults with LD to optimally benefit from the accommodations.

If a teacher's major approach to helping adults with LD acquire information relies on modifying the requirements of the task/expectation, he/she may be creating an overly dependent relationship; that is, rather than learning and applying strategies that help them cope on their own, students are dependent on others to change things. While it is true that many adults with LD have difficulty with academic demands such as reading for understanding, taking notes, and so on, it also is true that many of these same people can learn strategies (e.g., reading-comprehension strategies, notetaking strategies) if they are taught using effective teaching principles and procedures such as those described earlier (Deshler et al., 1996).

For example, let's consider notetaking, which is a frequent demand in high school, college, GED programs, and occasionally on the job. Often, if adults have difficulty taking notes (keeping up with the lecture, identifying the important parts to record, etc.), they are accommodated by being provided a set of notes from either the instructor or a peer. This may seem like a good idea, but it may not be. First, there is the dependency issue mentioned above. Second, because they know that notes will be provided later, there is a tendency for students to become "passive" learners during the lecture. Given research showing that the actual act of taking notes helps the student learn lecture material better (compared to not taking notes or being provided someone else's notes), this passivity may detract from the adults' acquisition and retention of content. Indeed, there is evidence that young adults with LD can learn and apply notetaking strategies to the extent that their notes are as complete as those of young adults without LD (Suritsky & Hughes, 1996).

If, after careful consideration of the above pitfall, the instructor decides that some accommodation is nevertheless necessary, he/she should be aware of the second possible pitfall: supplying the accommodation without supplying the skills needed to take advantage of it. Here are a couple of examples. An adult who has difficulty in written expression, especially in spelling, may be accommodated by being provided a computer with a word processing package and a spell checker. When no one teaches the adult how to make the most of this technological accommodation, the effectiveness is significantly reduced. Indeed, merely providing the spell checker to young adults with

LD is insufficient (McNaughton, Hughes, & Ofiesh, 1997); they need to be taught *how* to use the spell checker and other basic proofreading strategies in order to make the accommodation effective.

Another example is taping texts. It is insufficient to provide a tape to an adult who does not have the comprehension strategies needed to make sense of the text. The same can be said about the accommodation of extended test time. For adults who lack study strategies or test-taking skills, the provision of extended time probably will not maximize their ability to "show what they know" (Hughes, 1996).

In summary, accommodations can be useful and, in some cases, necessary for adults with LD to acquire and demonstrate their mastery of knowledge. However, in other situations, it may be better to explicitly teach strategic skills designed to make adults with LD more independent learners. Also, in some instances, adults will need to be taught how to take full advantage of provided accommodations.

Specialized approaches. The field of learning disabilities is replete with programs that purport to yield amazing results. Unfortunately, most "specialized" approaches have not withstood the test of controlled research and objective scrutiny. One example is the "learning styles" or "modality instruction" approach to teaching. This teaching methodology is based on the assumption that persons with LD can learn normally if we bypass areas where they have perceptual deficits (e.g., auditory, visual) and teach to their modality strength. While this approach has some intuitive appeal, there is little evidence to support its use with adults with LD (Hallahan, Kauffman, & Lloyd, 1996).

The key point here is that there currently are no "special" approaches specifically designed for individuals with LD that "make them normal" or "cure" their learning disability. Unfortunately, many programs exist that purport to do just that. Caution should be applied before adopting such approaches.

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Specific Learning Disabilities: A Civil Rights Issue

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Executive Summary

This monograph examines the legal rights of adults with specific learning disabilities, primarily in the areas of education, including adult education, and employment. Qualified individuals with impairments that substantially limit a major life activity generally are protected from discrimination in public and private education, employment, and access to public accommodations under the Rehabilitation Act of 1973 (RA) and the Americans with Disabilities Act of 1990 (ADA). Specific learning disabilities are impairments covered by these acts and may give rise to other entitlements. Assistance may be available through the Social Security Act and the Department of Vocational Rehabilitation. While this monograph deals with the legal rights of adults in the areas of education and employment, the RA and ADA anti-discrimination provisions also apply to the criminal justice system, including the processes of arrest, trial, and incarceration.

Persons with specific learning disabilities are not required to disclose their disabilities. By the same token, undisclosed disabilities need not be accommodated by postsecondary and adult educators or employers. If an individual does not request accommodations, there is no requirement to provide them. Some adult educators and postsecondary programs notify all students both orally and in writing that they may disclose disabilities and request accommodations. Similarly, an adult literacy provider might inform all students that some reading problems may arise out of specific learning disabilities and that information is available concerning testing and accommodations. This approach informs all students, avoids singling out students with suspected disabilities, and protects the privacy of students with disabilities who choose not to disclose.

Requests for accommodations may have to be documented appropriately by a qualified professional. Under the ADA and RA, requests for documentation must be reasonable but should include diagnosis, evaluation of impact, and recommendations. A diagnosis *is what its name suggests: an authoritative opinion by one qualified to make it, concluding that a learning disability is present. Some courts appear to prefer diagnoses that refer to published criteria, such as the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). An* evalu-

ation of impact *demonstrates how the diagnosed impairment affects the individual. It shows the precise way in which a physical or mental impairment affects the functioning of a particular individual. In the case of the ADA and RA, the impact evaluation must show that--in an individual case--the impairment substantially limits a major life activity, such as learning, working, thinking, concentrating, or interacting with others. Finally, the documentation should set forth* recommendations *as to accommodations appropriate for the individual in the educational program or workplace.*

Virtually all educational institutions (regardless of whether they are elementary, secondary, adult, or postsecondary) must provide reasonable accommodations to persons with disabilities. Accommodations fall in three principal areas: (a) testing (for admissions, evaluation of academic performance, and graduation); (b) the delivery of course materials; and (c) non-academic benefits of school or college life (e.g., sports, dormitory living). Accommodations in the educational setting may include extra time on tests, private room for tests, note-takers, textbooks on tape, taped classroom lectures, readers, proofreaders, oral tests, and access to computers and special software.

Most public and private employers are required to provide reasonable accommodations of three general types: (a) those required to ensure equal opportunity in the job application process; (b) those that enable the individual with a disability to perform the essential features of a job; and (c) those that enable individuals with disabilities to enjoy the same benefits and privileges that are available to individuals without disabilities. Generally, reasonable accommodations for individuals with specific learning disabilities fall into one or more of the following categories: workspace accommodations; assistive technology to facilitate organization, planning, and communication; accommodations that clarify instructions and lines of authority; increased supervisor feedback; scheduling accommodations such as flex-time; and job modification and reassignment.

Introduction

In this paper, we examine the legal rights of adults with specific learning disabilities, primarily in the areas of education, including adult education, and employment. The principal laws that give rise to these legal rights are two federal anti-discrimination laws: the Rehabilitation Act of 1973 (RA)[1] and the Americans with Disabilities Act of 1990 (ADA).[2] Before discussing these laws and the rights they confer on individuals with disabilities, we first explore the meaning of the term *specific learning disability*.

Legal Definition of the Term Specific Learning Disability

The term *specific learning disability* has a number of meanings, including the "common sense" meaning, the medical meaning, and the legal meaning. Not every individual with a specific learning disability in the medical sense is entitled to protection under the laws. In this paper, the principal focus is on the RA and the ADA.

The RA and ADA potentially apply to any "individual with a disability," a term that is defined to include one who has a physical or mental impairment that substantially limits one or more of such a person's major

life activities. The term *impairment* is not specifically defined by either law. It is defined by federal regulations that implement these statutes to include "any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities."[3] This is a formulation common to both the RA and ADA.

The term *specific learning disabilities* is not further defined in the RA/ADA. However, the Individuals with Disabilities Education Act (IDEA)[4] provides a definition, which the courts have used in construing the RA and ADA (Argen v. New York State Board of Law Examiners, 1994; Lyons by Alexander et al. v. Smith et al., 1993). The IDEA defines a specific learning disability as "a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations. . ."

The IDEA's definition, while helpful, is not exhaustive. Though not specifically listed as a specific learning disability, attention deficit hyperactivity disorder (ADHD) has sometimes been found to be a learning disability under these laws (e.g., Capistrano U.S.D. et al. v. Waitenberg et al., 1995; Susan N. et al. v. Wilson S.D., 1995). In any event, ADHD that substantially limits a major life activity has been recognized as a disability. ADHD is a neurobiologically based disorder that has an impact on learning and behavior. Specifically, persons with ADHD may display such symptoms as inattention, hyperactivity, and/or impulsivity. Many persons with specific learning disabilities also have ADHD.

The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) is frequently consulted for medical definitions of learning disabilities. Respected by many courts, DSM-IV discusses specific learning disabilities and provides diagnostic criteria under a number of general headings, including learning disorders, communications disorders, and developmental coordination disorders. DSM-IV also discusses and provides diagnostic criteria for ADHD.

Federal Laws Applicable to Adults with Learning Disabilities

Constitution

The 5th and 14th amendments to the Constitution provide for equal protection of the laws and due process. Both amendments have been interpreted to require that disadvantaged minorities (including individuals with disabilities) be afforded equal access to public education (Brown v. Board of Education, 1954). However, the two amendments apply only to governmental actions. To ensure that employment, education, and public accommodations were truly open to all citizens, the Congress enacted the RA and ADA to implement the spirit of these fundamental rights and extend them to the private sector.

The Rehabilitation Act of 1973

The Rehabilitation Act of 1973 (RA)[5] made discrimination against individuals with disabilities (including individuals with specific learning disabilities that limit substantially a major life activity) unlawful in three areas: (a) employment by the executive branch of the federal government; (b) employment by most federal government contractors; and (c) activities that are funded by federal subsidies or grants. This latter category includes all public elementary and secondary schools and most postsecondary institutions. The statutory section that prohibits discrimination in grants was numbered §504 in the original legislation; hence, the RA is often referred to simply as "Section 504."

The RA affects individuals with learning disabilities in several ways. For example, under Section 504, individuals with impairments that substantially limit a major life activity, such as learning, are entitled to academic adjustments and auxiliary aids and services, so that courses, examinations, and services become accessible to them. Other sections of the RA create a limited requirement for affirmative action in the hiring of persons with disabilities by the executive branch of the federal government and most federal government contractors. For example, the RA requires that the federal government be a model employer. Employment by the executive branch of the federal government is regulated by the Civil Service Reform Act of 1978 and the RA.[6] Together, they prohibit discrimination against individuals with disabilities, including such impairments as specific learning disabilities and ADHD that substantially limit major life activities, by the executive agencies, military departments (civilian employees), U.S. postal service, the Postal Rate Commission, and the Tennessee Valley Authority. The acts also require affirmative action by those agencies. The Office of Personnel Management (OPM) provides information regarding available federal jobs. Each agency of the federal government is required to include in its contracts clauses that obligate the contractor to prepare and implement an affirmative action program (an "outreach program") for the hiring and advancement of "qualified individuals with handicaps."

The Americans with Disabilities Act of 1990

In 1990, the Congress enacted the Americans with Disabilities Act (ADA).[7] This act extended the anti-discrimination concepts of the RA to (a) employers with 15 or more employees (Title I); (b) all activities of state and local governments, including but not limited to employment and education (Title II); and (c) virtually all places that offer goods and services to the public, termed "places of public accommodation" (Title III). In addition, the ADA extended the anti-discrimination provisions of the RA to employment by Congress.

Other Entitlements

Social Security. The Social Security Act provides in Titles II and XVI for the payment of benefits and Supplemental Security Income (SSI) to disabled persons. To obtain SSI benefits, an individual must (a) be disabled, and (b) have income and resources that do not exceed the prescribed maximums.[8] A disability for purposes of SSI is "the inability to do any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months."[9] Entitlement must be established through the presentation of evidence supported by "acceptable medical sources" (i.e., appropriately qualified medical personnel). Many of the claims are decided on the basis of evidence presented by the "treating sources" (i.e., by those actually treating the patient). Other sources include medical reports and consultative examinations. The content of medical reports is specified by regulation. Essentially, the specified report involves all the elements of a standard examination in the applicable medical specialty (U.S. Department of Health and Human Services, 1994).

Vocational Rehabilitation. Training may be available through the local vocational rehabilitation office. Generally, an individual is eligible for services when (a) there is a documented physical, mental, or emotional disability; (b) the disability limits ability to find, get, or hold a job; and (c) there is a good chance that vocational rehabilitation services can help with finding and keeping a job. For eligible individuals, planning with a counselor involves a review of test results to determine strengths and limitations. An Individualized Written Rehabilitation Program (IWRP) will be developed to help with finding and keeping a job. The IWRP may include type of job; services needed to prepare; agreement on who will pay; date services will begin; and ways to determine if services are helping with preparation for the job. Vocational rehabilitation services may include counseling and guidance; services and equipment for specific disabilities; vocational training to develop a skill; tools and equipment needed for the job; job placement services; and follow-up services.

Elements To Be Proven in an RA or ADA Case

Our principal focus is the RA and the ADA, because these laws offer protection to many individuals with learning disabilities in educational and employment settings. There are several elements to be proven in establishing rights under these laws.

To obtain the protections of the RA/ADA, an individual is required to establish that the RA or ADA applies and that he/she (a) is an "individual with a disability"; (b) is "otherwise qualified"; and (c) has been denied a job, education, or other benefit "by reason" of that disability (Fitzgerald v. Green Valley AEA, 1984). Each of these requirements is briefly discussed below.

Individual with a Disability

Impairments Covered. The RA/ADA applies to any "individual with a disability," which includes one who has a physical or mental impairment which substantially limits one or more of such person's major life activities.[10] The term "individual with a disability" includes individuals with specific learning disabilities, ADHD, as well as other neurological impairments and psychiatric disorders that substantially limit a major life activity. Conditions such as left-handedness and lack of familiarity with the English language are not covered, even though they may interfere with learning and working.

Substantially Limits Activities. The impact of the impairment must be severe enough to result in actual substandard performance. The regulations provide that the term "substantially limits" means either that an individual is (a) "[u]nable to perform a major life activity that the average person in the general population can perform" or is (b) "[s]ignificantly restricted as to the condition, manner or duration" of performing the major life activity in question, when measured against the abilities of the "average person in the general population."[11]

Who is the "average person" and what is "the general population"? These questions are of minor importance for persons with physical impairment, such as mobility, vision, and hearing impairments, which can be measured with a high degree of reliability and where statistics have been compiled to generate norms. Measurements and comparisons are far less precise for learning and psychiatric impairments, however.

In one case, the Department of Education's Office for Civil Rights ruled that a child with ADHD who struggled with his work (working twice as hard), but whose classroom performance proved adequate and who exhibited no disruptive behavior, was *not* an individual with a disability because his impairment did not interfere substantially with learning![12] In contrast, in some cases, medical students and law students with learning disabilities and/or ADHD who clearly had achieved in learning at a level at least equal to that of the average person have been found to be persons with disabilities entitled to accommodations in courses and testing (e.g., Weintraub v. Board of Bar Examiners, 1992).

Major life activities. An impairment must substantially limit a major life activity before it can be considered a "disability" under the law. Major life activities are considered to include "caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working."[13] Note that the regulations provide that learning and working are major life activities, and these are the ones that most concern us. However, working is treated differently from all other major life activities for purposes of considering whether an individual with an impairment is substantially limited. In order to determine whether a substantial limitation on working exists, the individual's impairment must bar him or her from significant classes of jobs, and not just a particular job.

The list of major life activities contained in the federal regulations is (by its own admission) not exclusive. The Equal Employment Opportunity Commission (EEOC) has added "mental and emotional processes such as thinking, concentrating, and interacting with others" to the list of major life activities its investigators will recognize. The explicit recognition that particular "mental and emotional processes" are among the major life activities may help to resolve the problem we addressed above relating to comparison to the average person. An accomplished person in overall learning may nonetheless be impaired compared to the average person in the particular processes of concentrating or visual discrimination.

Otherwise Qualified

Under both the RA and ADA, an "individual with a disability" must be one who is "otherwise qualified." An "otherwise qualified" individual is one who, though having a disability, would be eligible for the education, job, or program benefit, with or without a reasonable accommodation. The institution or employer must either provide the accommodation or justify in detail the refusal to provide it (Fitzgerald v. Green Valley AEA, 1984). Note that in public elementary and secondary schools a student is presumed to be qualified for public education, and it is not necessary to submit proof.

Denied Benefits

To be covered under the RA/ADA, an individual with a disability also must show that the denial complained of (e.g., employment termination) was because of the disability. If an individual's employment was terminated because of insubordination and not because of the disability, the fact that a disability also is present does not give rise to protection under the ADA.

Documentation

Disability documentation consists of three basic elements: (a) diagnosis, (b) evaluation of impact, and (c) recommendations. Together, these elements establish the existence of a disability, the areas of functioning affected by the disability, and the specific strategies and accommodations in education, testing, workplace, and life in general made necessary by that disability. This paper considers these three basic elements of documentation in greater depth.

A diagnosis is what its name suggests: an authoritative opinion by one qualified to make it, concluding that a specific learning disability is present. Legally speaking, that also establishes the existence of an impairment under the ADA/RA. Some courts appear to prefer diagnoses that refer to DSM-IV. In the case of specific learning disabilities, diagnoses usually are made by psychologists and educational diagnosticians. By comparison, diagnoses of ADHD most often are made by medical doctors and psychologists.

An evaluation of impact shows the precise way in which the impairment affects the functioning of the particular individual. In the case of the ADA

and RA, the impact evaluation must show that--in an individual case--the impairment substantially limits a major life activity, such as learning, working, thinking, concentrating, or interacting with others.

Recommendations may suggest strategies, services, or accommodations appropriate for the individual. Strategies may be recommended for the individual to use in coping with disabilities. Reasonable accommodations may be recommended, which will enable the individual to meet the essential requirements of an educational program, test, or job, without imposing an undue hardship on an employer or institution. Reasonable accommodations would be requested of the educational program or employer. It is important to show how the accommodations address the particular individual's disabilities and that the individual, with or without reasonable accommodations, is qualified to perform the academic or occupational work involved. To maximize the helpfulness of the report, the professional must carefully evaluate the impact of the individual's disabilities on the particular requirements and propose recommendations that are specific and tailored to the situation.

The only legal requirement governing the amount of documentation is that "[R]equests for documentation must be reasonable. . . ."[14] The term "reasonable" is not further defined. As a practical matter, an individual with a disability should be prepared to present that amount of documentation that will persuade the educational institution or employer to provide the accommodation.

Accommodations may be required by adults with specific learning disabilities in a number of settings. Some individuals may not have completed high school and may wish to obtain an equivalent to a high school diploma or to take adult education classes. Others may wish to enter college or trade schools. All will eventually seek to enter the workplace. The next sections explore the application of rights in those settings.

Legal Rights: Education

The GED

The General Educational Development (GED) diploma, recognized throughout the United States as the equivalent of a high school diploma, is awarded following the administration of five standardized tests covering writing skills, social studies, science, interpreting literature and the arts, and mathematics. The GED Testing Service recognizes its obligation to provide accommodations to individuals with learning disabilities. In the GED Testing Service's view, the principal learning disabilities include dyslexia, dysgraphia, dyscalculia, dyslogia, attention deficit disorder, receptive aphasia, distractibility, and hyperactivity (GED Test Accommodations, 1992, p. 5). Note that most of the listed conditions (except ADD and hyperactivity) are learning disorders. Because the GED Tests are so difficult, they are not

an appropriate alternative for adults with some types of developmental or emotional disabilities (GED Test Accommodations, 1992, p. 4).

The GED Testing Service indicates that its principal accommodations consist of (a) an audiocassette edition of the test with printed reference copy and double time; (b) a large-print test edition with extended time; (c) use of a scribe; (d) extended time; (e) use of a calculator, (f) frequent breaks with or without extended time; and (g) a private room. Having described these potential accommodations, the Testing Service states that it requires "fairly extensive documentation" of the need for accommodations (GED Test Accommodations, 1992, p. 4).

Postsecondary and adult education

The requirement for reasonable accommodation affects virtually all educational institutions, regardless of whether they are elementary, secondary, adult, or postsecondary, in three principal areas: (a) testing (for admissions, evaluation of academic performance, and graduation); (b) the delivery of course materials; and (c) nonacademic benefits of school or college life (e.g., sports, dormitory living). The basic rules are as set forth below.

The accommodations must "recognize individual communications needs" and must provide "contemporaneous communication" of the entire educational experience being offered, including class participation. Their selection is to be primarily guided by a consultative process with the student, not just unilaterally by the institution (United States v. Becker C.P.A. Review, 1993).

Examinations must be structured in such a way that their results "accurately reflect the individual's aptitude or achievement level or whatever other factor the examination purports to measure."[15] In general, entrance and other examinations may not reflect "the individual's impaired sensory, manual, or speaking skills" unless (a) the purpose of the test is to measure those factors; and (b) the measurement of those factors has a valid educational purpose. Testing that relies on a single criterion is unlawful where that criterion can be shown to be an inaccurate predictor of performance and the use of that criterion has no compelling justification.

The examinations are generally required to be modified "in the length of time permitted for completion" and in the "manner in which the examination is given."[16] Auxiliary aids and services must be provided. Modifications are not required where they will alter the fundamental nature of the course or pose an undue hardship. The U.S. Department of Education has stated that, in making undue hardship determinations, the primary consideration will be the size and budget of the institution, compared with the cost of the requested aids and not the amount of tuition paid by the student.[17]

An educational institution must provide equal access to classroom and other educational materials. This duty is described in the regulations as an obligation to provide auxiliary aids and services.[18] Specific accommoda-

tions for specific learning disabilities in the educational setting may include extra time on tests, private room for tests, note-takers, text books on tape, taped classroom lectures, readers, proofreaders, oral tests, and access to computers and special software. In addition, some institutions have a policy of permitting course substitutions for persons with learning disabilities in such areas as mathematics and foreign language.

As mentioned earlier, people with specific learning disabilities are not required to disclose them. By the same token, postsecondary and adult education programs are not required to accommodate an undisclosed disability or to provide an accommodation that has not been requested. Some programs send out letters and orally announce that persons with disabilities may disclose a disability and request accommodations. Similarly, an adult literacy provider might inform all students that some reading problems may arise out of specific learning disabilities and that information is available concerning testing and accommodations. This approach informs all students, avoids singling out students with suspected disabilities, and protects the privacy of students with disabilities who choose not to disclose.

Occupational and Professional Licensing

Occupational and professional licensing is subject to the same requirements as postsecondary institutions. Examples of occupational licensing include licenses to operate commercial vehicles and to perform certain trades, for example, beautician services. Professional licensing includes licenses to practice medicine, law, accounting, and other professions. Typical accommodations for persons with specific learning disabilities include extra time on tests and private room for tests

Legal Rights: Employment

The requirement for reasonable accommodation generally applies in the workplace as well. Reasonable accommodations are of three general types: (a) those required to ensure equal opportunity in the job application process; (b) those that enable the individual with a disability to perform the essential features of a job; and (c) those that enable individuals with disabilities to enjoy the same benefits and privileges as those available to individuals without disabilities (U.S. Equal Employment Opportunity Commission, Interpretive Guidance, p. 468).

The ADA and its implementing regulations require that the employer and employee engage in an interactive process to determine the precise accommodations that are necessary (Beck v. University of Wisconsin, 1996). The Job Accommodations Network (JAN), a service of the President's Committee on Employment of People with Disabilities, was established in 1984 to provide information about job accommodations to individuals with all types of disabilities. Reasonable accommodations for adults with specific learning disabilities suggested by JAN and by others include:

Workspace accommodation. This might include a private office or a nondistracting workspace.

Assistive technology. Technology is used to facilitate organization, planning, and communication. Day planners, computer software, and video or audio equipment to assist with auditory memory deficits are examples, as are tape recorders for important meetings with other staff members and supervisors.

Accommodations that clarify instructions. These can include written instructions, checklists to provide structure in multistage tasks, and the issuance of oral instructions slowly and clearly. It may be necessary to provide a manual or handbook in writing, with highlights to clearly outline rules, regulations, and expectations. It may also be necessary that set routines and schedules be employed wherever possible. Clearly defining lines of authority may also be required.

Increased supervisor feedback. This may include "milestone" assessments of task completion and more frequent reviews and performance appraisals (Lynch v. Department of Education, 1992).

Scheduling accommodations. These include flex-time and possibly working at home.

Reassignment and retraining. Reassignment to a vacant position that better matches the individual's strengths may be required. Retraining to qualify for that position may, in some cases, be a reasonable accommodation (Lynch v. Department of Education, 1992).

Note that these accommodations are reasonable in the sense that they are compensatory actions that an employer might want to take to ensure that the talents of an individual with learning disabilities can be used effectively in the workplace. As such, they represent approaches that should commend themselves to sophisticated managers in particular cases. They are not necessarily the minimum "reasonable accommodations" whose provision is required by law. Therefore, their appropriateness under the law must be demonstrated.

Legal Rights: Criminal Justice System

Is there a link between specific learning disabilities and criminal behavior? Some studies suggest that persons with learning disabilities, especially nonverbal learning disabilities, may be at greater risk for problems with the criminal justice system. This type of learning disability may impact the ability to interact socially, read facial expressions, and interpret body language. It seems unclear to what extent these learning disabilities increase criminal behavior or simply increase the likelihood of arrest, prosecution, conviction, and more harsh penalties.

Whatever the connection may be, generally, learning disabilities do not excuse criminal conduct, although a learning disability may be a factor in sentencing. As to the workplace, criminal conduct may be a proper cause for termination of employment. For example, if a person with a learning disability and ADHD has a job for which a driver's license is needed and then loses his license because of a DUI conviction, his employment may be terminated properly. The reason for the termination is the conviction, not the disability.

Persons with learning disabilities that substantially limit a major life activity are entitled to accommodations under the RA or the ADA in the criminal justice process, including police questioning, the courtroom, and incarceration. For example, some persons with reading disorders may need information presented orally. Many persons with learning disabilities may need repetition or additional time in which to absorb information and comprehend questions.

The United States has a system of federal, state, and local prisons that parallels its court system. There are presently 5 million Americans incarcerated in prison, a number that does not include persons on work release programs, community service, or probation. Prisons receiving federal aid are potentially subject to the RA as federal aid recipients. All but the federal prisons are state and local governmental entities which are subject to Title II of the ADA (Torcasio v. Murray, 1995; Gabes v. Rowland, 1994: Yeskey V. Pennsylvania Department of Corrections, 1997).

What would the RA and ADA require? In general, they require that the prison system make the rehabilitative "benefits" of prison available to individuals with disabilities on equal terms. For example, it is probable that libraries, recreational facilities, courses, or work opportunities intended to educate, recreate, or rehabilitate the inmate or to provide opportunities to minimize the length of incarceration must be provided with reasonable accommodations for those with disabilities. For inmates with specific learning disabilities, accommodations might include course accommodations (e.g., books on tape) and test accommodations (e.g., extra test time). The right to accommodations even extends to persons visiting pursuant to the inmates' visitation privilege. In one case (Niece v. Fitzner, 1996), the court required that a department of corrections provide accommodations to a physically challenged person seeking to visit a prison inmate whom she planned to marry.

Finally, it is encouraging that some programs are seeking to promote better outcomes for criminal offenders with learning disabilities. For example, there is a Life Skills Program in Washington state, which is an alternative to more harsh penalties for misdemeanor offenders. The course program covers information concerning specific learning disabilities and ADHD, coping mechanisms, and community resources. Persons completing the program have a lower recidivism rate than persons not in the program.

Footnotes

1 29 U.S.C.A. § 701 et seq.

2 42 U.S.C.A. § 12101 et seq.

3 29 C.F.R. § 1613.702(b)(2).

4 20 U.S.C. § 1401(a)(15).

5 29 U.S.C.A. § 701 et seq.

6 5 U.S.C. §§ 791, 794.

7 42 U.S.C.A. § 12101 et seq.

8 42 U.S.C.A. § 402 et seq.; 42 U.S.C.A. §§ 1381, 1382c(a)(3).

9 20 C.F.R. § 404.1505.

10 29 U.S.C.A. § 706 (8)(b)(i); See also 42 U.S.C.A. § 12102(2); Fitzgerald v. Green Valley Area Educ. Agency, 589 F. Supp. 1130 (S.D. Iowa 1984).

11 29 C.F.R. § 1630.2(j)(1)(i)-(ii).

12 Letter of Findings issued to Forest Hills Local School Dist. Docket No. 15-93-1016; Mar 23. 1993.

13 29 C.F.R. § 1630.2(i).

14 28 C.F.R. Pt. 36, App. B p. 626; Preamble to regulation on nondiscrimination on the basis of disability by public accommodations and in commercial facilities.

15 28 C.F.R. § 36.309(b)(1)(i).

16 28 C.F.R. § 36.309(b)(2).

17 Letter from W. Smith, Acting Assistant Secretary for Civil Rights, U.S. Department of Education, to Neill Stern, Executive Vice President, Parker College of Chiropractic, March 6, 1990.

18 28 C.F.R. § 36.309 et seq.

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National Adult Literacy and Learning Disabilities Monographs: A Conclusion

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As with many individuals with limited literacy skills, adults with learning disabilities (LD) often experience frustration and failure in their day-to-day lives. Literacy and adult education programs are designed to support adult students with limited literacy skills by teaching them needed information to improve their quality of life and by helping them become more successful in their everyday activities. However, adults with LD do not always meet with success in traditional literacy and adult education programs because these programs often are not equipped to deal with learning disabilities.

As a nation, we must undertake the challenge of providing a means for adults with LD to improve their quality of life and become more successful in their daily activities. While there is reason to hope that we can meet this challenge, thus far there has been only limited success. We acknowledge that many obstacles must be overcome. Some of the reasons for this failure include (1) our ever-changing understanding of the general characteristics of learning disabilities; (2) the inability to accurately predict who may have a learning disability; (3) our use of child-based criteria for diagnosing adults as learning disabled and the lack of consensus on adult-based criteria; (4) our inability to sufficiently motivate and retain individuals in literacy programs for a long enough period of time; (5) the use of teaching practices that often are based on stereotypes and erroneous generalizations both about individuals with LD and how their needs should be addressed; (6) our limited understanding of the legal issues and rights of adults with LD; (7) the limited impact of many resources and practices currently available and used by practitioners in their efforts to *do something*; (8) the failure to view personal, social, and economic consequences of learning disabilities from a lifelong perspective; and (9) the lack of collaboration among individuals, groups, and agencies concerned with the needs of adults. These reasons, as well as others, must be considered when developing a national agenda for addressing

the needs of adults with learning disabilities.

The areas of adult literacy and learning disabilities urgently need a great deal of high quality research, especially in the development of effective literacy education programs that encourage adults to stay in programs, help them make progress, and support greater success in their everyday lives. Researchers in adult education and learning disabilities must connect with basic learning and cognitive theories and provide practitioners with a greater understanding of how to promote learning in these populations. Research data is needed in areas such as educational attainment, motivation, self-esteem, social skills and relationships, and the rate and success of employment.

The four monographs entitled *Characteristics of Adults with Specific Learning Disabilities*, *Screening for Learning Disabilities in Adult Literacy Programs*, *Effective Instruction for Adults with Learning Disabilities*, and *Specific Learning Disabilities: A Civil Rights Issue* are scholarly pieces that we hope will stimulate discussion and help determine the direction the field should take when looking seriously at adults with LD, especially in regard to setting a research agenda. The first monograph discusses the great diversity among adults with LD and the characteristics associated with a learning disability. It points out the need to rethink what a learning disability might mean to an adult versus what we know about the characteristics of learning disabilities in childhood. These characteristics have significant implications for both the assessment process and instructional methods.

The second monograph discusses screening adults for suspected learning disabilities, the initial step in the assessment process. The monograph also addresses how screening fits into the assessment process, its implications for further assessment activities, the legal implications of a screening process, and its importance in supporting adult educators in providing valuable learning opportunities for adult learners.

The third monograph presents information on effective instructional practices. Because there is little empirical, published research available on effective instruction of adults with learning disabilities, the principles of effective instructional practices are based, to some extent, on research conducted with younger individuals with LD. However, the monograph puts into perspective the effective instructional practices adult educators and literacy providers should use when teaching adults with LD. It also makes us recognize the need for research on the extent to which these instructional practices are effective for adults with LD.

Finally, the fourth monograph deals with the civil rights issues of individuals diagnosed with a learning disability in education and employment settings. It specifically discusses the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the rights each law gives to individuals with disabilities.

As we improve our understanding of adults with LD and the issues discussed in these monographs, we also must increase high quality basic and applied research to support adult education and literacy providers who work with this population. Although a difficult task, it is a crucial one as adult educators and literacy providers undertake the challenge of providing a means for adults with LD to improve their quality of life and become more successful in their day-to-day activities.

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